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ENVIRONMENTAL MANAGEMENT AND PUBLIC POLICY
AN ANALYSIS OF THE ENVIRONMENTAL IMPACT STATEMENT
PROCESS WITH EMPHASIS ON PROCEDURES OF THE ENVIRONMENTAL
PROTECTION AGENCY AND FEDERAL AGENCY ACTIVITIES IN THE
SOUTHEASTERN UNITED STATES

GEORGIA STATE UNIVERSITY

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16. Abstracts(BIBLIOGRAPHY) Presents results of an inquiry into (1) the environmental impact statement (EIS) procedures of the Environmental Protection Agency (EPA); (2) resources used in EIS programs; (3) monitoring procedures during project implementation; and related environmental issues, including (4) Technology Assessment (TA); (5) the "Quality of Life" (QOL) concept; and (6) Social Auditing (SA). Methodologies include questionnaires, interviews, and analyses of randomly selected EIS's. Concludes that (1) EPA's procedures bes meet legal requirements for EIS's; (2) agencies lack adequate project implementation monitoring procedures; (3) EIS programs lack adequate budget controls; (4) EIS procedures apply directly in the emerging areas of TA, QOL, and SA. Recommends that (1) agencies review EPA's regulations for guidance in refining their own programs; (2) the Council on Environmental Quality amend its "guidelines" to require monitoring programs; (3) accounting routines be established to reflect EIS program costs; and (4) individuals concerned with assessment activities acquaint themselves with existing EIS procedures, especially those of EPA.			
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ACCEPTANCE

This dissertation was prepared under the direction of the candidate's dissertation committee. It has been approved and accepted by all members of that committee, and it has been accepted in partial fulfillment of the requirements for the degree of Doctor of Business Administration in the School of Business Administration of Georgia State University.

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ABSTRACT

ENVIRONMENTAL MANAGEMENT AND PUBLIC POLICY:
AN ANALYSIS OF THE ENVIRONMENTAL IMPACT
STATEMENT PROCESS WITH EMPHASIS ON PROCEDURES
OF THE ENVIRONMENTAL PROTECTION AGENCY
AND FEDERAL AGENCY ACTIVITIES IN THE
SOUTHEASTERN UNITED STATES

By

Donald Ray Hudson

February, 1974

Committee Chairman: Dr. Waino W. Suojanen

Major Department: Management

The research reported here was supported by the Region IV Office of the United States Environmental Protection Agency. The study was undertaken to provide information for public and private sector administrators about aspects of environmental management arising from legal obligations imposed under the National Environmental Policy Act of 1969.

The primary research effort was aimed at obtaining and analyzing data in three areas: (1) the environmental impact statement procedures of the Environmental Protection Agency; (2) Federal agency resources used in preparation of impact

statements; and (3) the "follow-up" procedures employed by Federal agencies during project implementation in order to ensure protection of environmental values identified during the planning phase. In addition to these three major areas of interest, the study also involved analysis of three related aspects of environmental management: (1) Technology Assessment; (2) the "Quality of Life" concept; and (3) Social Audititing.

The primary objectives were accomplished through the use of "primary data" obtained through a variety of methods. A questionnaire was distributed to headquarters officials of thirty-three different Federal agencies pertaining to each agency's "follow-up" procedures. In-depth interviews were held with officials of the Environmental Protection Agency in Washington, D.C., and the Southeastern (Region IV) EPA Office in Atlanta, Georgia. A biographical questionnaire was sent to all the regional offices of EPA to obtain background data on agency personnel engaged in impact statement preparation. A "proportionate stratified random sample of elements" plan was followed in selecting impact statements prepared by all Federal agencies in the Southeast during calendar year 1972 for detailed analysis. Data obtained from the "sample" statements were then compared to data derived from seven statements prepared by the Region IV staff of EPA. Additional interviews were held with officials of the Council on Environmental Quality, operating agencies of the Federal government, state, and local units.

The secondary research objectives were pursued exclusively on the basis of analysis of secondary data sources. Extensive use was made of public documents and unpublished material relative to the three areas of secondary interest.

Several general conclusions can be drawn from the results of this research. First, the procedures developed by the Environmental Protection Agency in response to requirements imposed by the National Environmental Policy Act and implementing "guidelines" of the Council on Environmental Quality appear to come closer to meeting the administrative requirements involved than do the procedures of other agencies examined. This finding leads to the recommendation that other agencies review the EPA program as a source of procedural guidance in refining their own procedures.

Second, the study found that all agencies lack an adequate procedural approach to monitoring impacts during project implementation. This finding leads to the recommendation that the Council on Environmental Quality amend its guidelines to require all agencies to develop a comprehensive monitoring program to ensure that projects are implemented in accordance with "conditions" imposed as a result of the environmental analyses preceding a decision to take action on a given project. This study contributes toward facilitating implementation of this policy recommendation by identifying a number of agency policies and procedures which collectively represent an adequate solution to the "follow-up" problem.

Third, the study revealed that agencies do not generally have adequate budgetary controls for administering their environmental assessment programs. There is a need to develop more detailed accounting for program related costs. The study indicated that more than seven million dollars were spent on statement preparation activities in the Southeast during 1972. Such an expenditure level necessitates improvement in the procedures for determining what costs are applicable to the assessment program in order to improve internal budget allocations.

Finally, the related areas of study reveal that procedures being developed in assessing environmental impacts required under the National Environmental Policy Act have applicability in the emerging areas of Technology Assessment, Social Auditing and "Quality of Life" measurement. Practitioners and policy-makers in these areas need to acquaint themselves with the procedures of Federal agencies which have already been developed in complying with the assessment requirements of NEPA. It is particularly recommended that such review be focused on the program of the Environmental Protection Agency.

CHAPTER 1

THE PROBLEM

1.1 Introduction. One need not be an "activist conservationist" to be aware of the extent of public concern for environmental issues. The broad regulatory measures which increasingly affect a larger and larger segment of the business community are firmly based on wide-spread popular support for legislation and executive policies aimed at curbing pollution and protecting the environment. This was vividly illustrated by voter response on environmental issues during the elections in November, 1972.

A wide range of environmental questions were dealt with by the voters:

...In New Jersey, for example, voters turned down a \$650-million transportation bond issue that would have earmarked \$410-million for new highways and \$240-million for mass transit development.

...Across the border in New York state, however, a \$1.15-billion bond issue to clean up the environment passed by a big margin. It allocates \$650-million for water pollution facilities, \$150-million for controlling air pollution from state and municipal buildings, \$175-million to help communities recycle garbage, and \$175-million to buy and prevent development of wilderness areas and wetlands.¹

¹"The Environment is Still a Winner," Business Week, November 11, 1972, p. 44.

...In Florida, voters told the state to go ahead with a plan to borrow \$240-million to buy land and keep it from development, and they also approved a constitutional amendment to make additional recreational land purchases. In Dade County, where new construction has been slowed because of pollution problems, voters approved eight of 10 items in a \$634-million bond issue that will help pay for a big new sewer system, garbage and trash disposal, a rapid transit system, parks, and street safety programs in Miami.

...Probably the biggest slap at business came in Colorado, where voters turned down a proposal to spend \$5-million of state funds to help prepare for the 1976 Winter Olympics....Coloradans decided 3 to 2 that potential environmental damage was not worth the benefits.

...In California, too, business lost more than it won. Voters, by a 55% to 45% margin, passed an initiative that puts the development of the state's coastline under control of a public commission. Led by land developers and utilities, business made a major effort to defeat the proposal....

...California business, however, did get voter approval of a referendum that allows the state to raise money through tax-exempt bonds, then lend the proceeds to industry for installation of pollution control facilities.²

1.2 Media Influence. The public recognition of environmental degradation occurred abruptly during the latter half of the 1960's. Although a number of energetic conservationist groups had long raised objections to many industry and governmental practices deemed harmful to the natural environment, widespread popular support for environmental protection was not evident until the media began to provide dramatic and extensive coverage of a whole series of sensational but

²Ibid.

relatively minor "ecological disasters." The visual impact of television coverage of oil-clogged beaches and of birds struggling to free themselves from ugly black patches of off-shore slicks only served to heighten the anxiety of a public already sensitive to threats of extermination from overpopulation or nuclear war.

Prominent scientists such as Barry Commoner, Paul Ehrlich, and René Dubos, added their voices to those of lesser stature in pointing out various dangers to society if man continued to behave as if he were not ecologically dependent on nature.

Discussing "the Environment Crusade, circa 1969," Leo Marx noted that:

...By the summer of 1969 it had become evident that the media were preparing to give the ecological crisis the kind of saturation treatment accorded the civil rights movement in the early 1960's and the anti-Vietnam War protest after that. (Observers made the comparison from the beginning.)³

Further evidence of media influence on public attitudes toward the environment is offered by James McEvoy, III, who also suggests that "the very large increase in Americans' exposure to their natural environments...and demonstrable deterioration in quality of many aspects of the natural, rural -- and especially the urban -- environment" may also

³Leo Marx, "American Institutions and Ecological Ideals," Science, November 27, 1970, p. 945.

have had a direct impact on the "rising level of public attention to and arousal over environmental problems."⁴

1.3 Who Is Concerned. A Gallup study in the fall of 1969 provides an insight into who is concerned about the environment.⁵ Men were found to be more concerned than women. This is attributed to the belief that men are typically more conscious of social and political issues than are women. Likewise, it is believed that men are more concerned because of their broader exposure to the natural environment through hunting and fishing activities.⁶ Aside from the significant difference in environmental concern between men and women, the Gallup study also revealed that:

...environmental concern is apparently high among more than half the adult public; it increases with income and, especially, education; and it is particularly strong in the West.⁷

1.4 Legislative Response. It is not surprising, given the extent of public interest in environmental issues, that the Congress was ready and willing in late 1969 to adopt far-reaching environmental legislation which has affected every

⁴James McEvoy, III, The American Public's Concern with the Environment: A Study of Public Opinion (Davis, California: Institute for Governmental Affairs, University of California, 1970), p. 8.

⁵Ibid., pp. 10-12.

⁶Ibid., p. 12.

⁷Ibid.

Federal agency and spawned similar legislation in more than a dozen states, all of which is having a direct effect on business activities.

The major law to flow from the new "environmental ethic" was the National Environmental Policy Act of 1969, Public Law 91-190, January 1, 1970 (NEPA). This Act established the national policy for the environment, provided for the establishment of a Council on Environmental Quality (CEQ), and levied a requirement on Federal agencies to give consideration to environmental impacts of agency projects. The latter requirement was contained in NEPA's Section 102:

Sec. 102. The Congress authorizes and directs that, to the fullest extent possible: (1) the policies, regulations, and public laws of the United States shall be interpreted and administered in accordance with the policies set forth in this Act, and (2) all agencies of the Federal Government shall--

(A) utilize a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts in planning and in decisionmaking which may have an impact on man's environment;

(B) identify and develop methods and procedures, in consultation with the Council on Environmental Quality established by title II of this Act, which will insure that presently unquantified environmental amenities and values may be given appropriate consideration in decisionmaking along with economic and technical considerations;⁸

⁸The National Environmental Policy Act, Public Law 91-190; 83 Stat. 852 et seq; 42 USC 4321-4347.

(C) include in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on--

- (i) the environmental impact of the proposed action,
- (ii) any adverse environmental effects which cannot be avoided should the proposal be implemented,
- (iii) alternatives to the proposed action,
- (iv) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and
- (v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

Prior to making any detailed statement, the responsible Federal official shall consult with and obtain the comments of any Federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved. Copies of such statement and the comments and views of the appropriate Federal, State, and local agencies, which are authorized to develop and enforce environmental standards, shall be made available to the President, the Council on Environmental Quality and to the public as provided by section 552 of title 5, United States Code, and shall accompany the proposal through the existing agency review processes;

(D) study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources;⁹

⁹Ibid.

(E) recognize the worldwide and long-range character of environmental problems and, where consistent with the foreign policy of the United States, lend appropriate support to initiatives, resolutions, and programs designed to maximize international cooperation in anticipating and preventing a decline in the quality of mankind's world environment;

(F) make available to States, counties, municipalities, institutions, and individuals, advice and information useful in restoring, maintaining, and enhancing the quality of the environment;

(G) initiate and utilize ecological information in the planning and development of resource-oriented projects; and

(H) assist the Council on Environmental Quality established by title II of this Act.¹⁰

1.5 Definitions. The "detailed statement" of environmental impact required by Section 102(2)(C) of NEPA is frequently referred to as a "102 Statement" or "Environmental Impact Statement (EIS)." The latter is defined by the United States Environmental Protection Agency as "a report, prepared by the Agency, which identifies and analyzes in detail the environmental impacts of an Agency action."¹¹ Both terms are used interchangeably in this study, and the process underlying implementation of Section 102 will be referred to as the "102 process," "102 statement process," "environmental impact statement process," or simply as the "EIS process."

¹⁰Ibid.

¹¹U.S. Environmental Protection Agency, "Preparation of Environmental Impact Statements: Interim Regulation," 38 Federal Register, p. 1697, January 17, 1973.

1.6 Executive Response. Executive response to public interest in environmental issues has also been far-reaching in its impact on agency performance and the business community at large. President Nixon adopted a much stronger position on environmental issues than his three immediate predecessors. Although NEPA was initiated within the Congress, President Nixon "made it a springboard to regain the initiative in this area for the Executive."¹² After signing NEPA into law on January 1, 1970, he took a number of actions in rapid-fire order which were aimed at establishing his Administration as one dedicated to the protection of the human environment.

His State of the Union Message on January 22, 1970, emphasized the environmental issue. He appointed the three members of the Council on Environmental Quality on January 29, 1970. His Budget Message of February 2, 1970, included environmental initiatives. On February 4, 1970, he issued an Executive Order directing abatement of pollution from federal facilities. In a special environmental message to Congress on February 10, he detailed a 37-point program of policy and initiatives for federal action. His speech to the Governors' Conference on February 25, 1970, dealt with environmental quality.

¹²Richard N. L. Andrews, "Environmental Policy and Administrative Change: The National Environmental Policy Act of 1969, 1970-1971," (Ph.D. diss., University of North Carolina at Chapel Hill, 1972), p. 112. The background information on this and the following page is based on Andrews' treatment of Executive Environmental Policy.

The President issued Executive Order 11514, which directed implementation of NEPA by the CEQ and other federal agencies, on March 5, 1970. This order spelled out procedural steps to be followed in implementing NEPA. Of particular importance was the directive for all federal agencies to:

...develop procedures to ensure the fullest practicable provision of timely public information and understanding of Federal plans and programs with environmental impact in order to obtain the views of all interested parties. These procedures shall include, whenever appropriate, provision for public hearings, and shall provide the public with relevant information, including information on alternative courses of action.¹³

It is apparent that the enactment of NEPA and the issuance of the Executive order implementing it were not simply isolated or routine actions, but indications of a strong commitment by the President personally to policy-making and initiatives in the environmental area. This outpouring of actions served to make it clear that not only the Congress, but the President as well, "was committed to incorporating environmental considerations into federal administrative processes."¹⁴

1.7 Governmental Reorganization. The most significant executive action following the passage of NEPA, however, was the governmental reorganization which led to the formation of the United States Environmental Protection Agency (EPA). The

¹³Ibid., p. 114.

¹⁴Ibid., p. 113.

President directed the formation of the EPA in his Reorganization Plan Number 3, which was dated July 9, 1970. The plan was subjected to hearings by both the House and the Senate and the Code of Federal Regulations was amended on December 2, 1970, to establish the EPA.¹⁵

The first Administrator of the EPA, Mr. William D. Ruckelshaus, has accurately described the EPA as an independent regulatory agency which reports directly to the President.¹⁶ Such agencies are independent of the substantive Cabinet Departments, such as Agriculture, Commerce, or Defense.¹⁷ A regulatory agency in the American system of government has quasi-judicial functions. This means that, in areas specifically defined by Congress and the President, the agency is a law enforcement agency and functions, to a degree, as prosecutor and judge as well. Such agencies set standards and evaluate public adherence to these standards. They enforce the laws requiring compliance with those standards.

As the name of the agency implies, the EPA is an agency which is charged with responsibilities related to the protection of the environment.

¹⁵Title 3, Code of Federal Regulations, 1970, p. 199.

¹⁶William D. Ruckelshaus, "The Structure and Program of the Environmental Protection Agency," speech presented to The Committee on Challenges to Modern Society, Brussels, Belgium, April 19, 1971, p. 3.

¹⁷Material in this section on the formation of EPA is based on a study by Donald R. Hudson, "The United States Environmental Protection Agency: A Case Study," mimeograph, February 29, 1972.

Commenting on the Agency's objectives during a speech in late 1971, Mr. John C. White, a regional official, noted that the EPA's "mission is to keep the water, the air, and the land as free as possible from pollution. Its charge is to mount a coordinated front-line attack on the environmental problems of air and water pollution, solid waste management, pesticides, radiation, and noise."¹⁸ A more succinct notion of the EPA's purpose is the President's view that it "would focus on setting and enforcing pollution control standards."¹⁹

The provisions of NEPA apply to the Environmental Protection Agency just as they do to any other agency of the Federal Government. The unique concern of EPA with the setting and enforcing of pollution control standards makes it an ideal agency in which to examine the nature of the problems generated by the Section 102 provisions of NEPA. Likewise, it serves as an excellent "laboratory" in which to seek answers to questions confronting those who must cope with environmental management issues, be they agency administrators or business managers seeking to satisfy a regulatory or licensing requirement or simply striving to operate in a "socially responsible" manner.

¹⁸John C. White, Acting Director, Enforcement Division, Region IV, U.S. Environmental Protection Agency, Atlanta, Georgia. Presentation to the American Institute of Plant Engineers, November 4, 1971, in Birmingham, Alabama, p. 2.

¹⁹U.S. Environmental Protection Agency, Environmental Protection - 1971 (Washington, D. C., U.S. Government Printing Office, 1971), p. 2.

1.8 Need for Improved Federal Agency Practices. The requirements imposed on all Federal Government agencies by Section 102 entail a substantial change in the decision making processes previously used by most agencies. The message of the Congress that a change was necessary, however, was unmistakable. The principal Senate sponsor of NEPA, Senator Jackson of Washington, noted that Section 102 is

...clearly designed to assure consideration of environmental matters by all agencies in their planning and decisionmaking--especially those agencies who now have little or no legislative authority to take environmental considerations into account.²⁰

Implementation of the 102 provisions has involved many agencies in legal entanglements and added additional time and expense to virtually all Federal projects. By August 1972, more than 200 lawsuits had been filed in connection with 2,933 EIS's filed with the CEQ through May 1972.²¹ Most of the lawsuits:

...have involved federally assisted highway or airport projects, Corps of Engineers water resources projects, land management activities of the Interior or Agriculture Department, licenses for nuclear powerplants, and federally assisted housing projects.²²

²⁰Council on Environmental Quality, Environmental Quality--The Third Annual Report of the Council on Environmental Quality (Washington, D.C.: Government Printing Office, August 1972), p. 239.

²¹Ibid., p. 249.

²²Ibid.

The frequency of court action in connection with NEPA suggests that Federal agencies are having difficulties in properly complying with the requirements of Section 102. It appears, therefore, that additional study of agency practices is desirable in an effort to improve current practices of these agencies. Such study should also prove of interest to private industries which may be expected to develop EIS's.

1.9 State Level Requirements. Protection of environmental interests is not an exclusive realm of Federal action. An increasing number of states have enacted legislation patterned after NEPA or issued executive orders which levy EIS requirements on state agencies as well as on private business entities in some cases. By February 24, 1973, thirteen states plus Puerto Rico had EIS provisions affecting state agencies in the same manner that NEPA applies to Federal agencies. It may be assumed that additional states will adopt such measures in the not too distant future. State level environmental policies are examined in Chapter 5 of this study.

1.10 Project Implementation Issues. An interesting "management" problem, and perhaps a major legal question, arises concerning the implementation of a decision which has been reached under the NEPA procedures. The issue was stated succinctly by EPA's Coordinator for Impact Statements during a personal interview earlier this year: "Who insures compliance with the terms of an environmental impact statement?"²³

²³Personal interview, Peter Cook, Coordinator for EPA Impact Statements, Office of Federal Activities, U.S. Environmental Protection Agency, Washington, D.C., February 6, 1973.

Clearly, there are "follow-up" aspects of agency decisions which involve the continued interests of parties who expressed environmental concern with the project during the EIS phase. The question arises as to the procedures agencies have developed to insure compliance with provisions of the EIS. Do agencies monitor compliance with the EIS or simply rely on applicants to carry out the necessary activities. In either case, the further question remains concerning the legal standing of citizens to insure such compliance through court action.

The answer to the question of who has EIS enforcement responsibility has major implications for achievement of the ultimate goals of NEPA. An hypothesis was formulated that adequate EIS "follow-up" procedures had not been developed. It proved correct. This represents an important policy area which will need the attention of the CEQ in the near future. This aspect of environmental management has not appeared in the literature to date, and it represents a major focus of this study. The issue is treated in Chapter 5.

1.11 Related Issues. The problems discussed thus far have been concerned with environmental impact studies which face both government and business as a result of legal requirements imposed at Federal and State levels by NEPA-type legislation. There are other dimensions of the EIS problem which arise because of changes in the operating environment of business associated with public values which gave rise to NEPA-type laws in the first place.

1.11.1 Technology Assessment. During the last session of Congress, a new Office of Technology Assessment (OTA) was created by the passage of the Technology Assessment Act of 1972.²⁴ It is not necessary to elaborate here about the legislative history of OTA, but it should be noted that the Office will be concerned, among other things, with various types of assessments of a wide range of innovations for which public funds may be used. One aspect of such assessment activities will relate to the environmental impact of new technology. Additionally, the Office is expected to investigate the long-term second and third order impacts of technical innovation on the social, cultural, and psychological environment. This, then, is a related area of potential concern with environmental impact analysis and the topic is examined in Chapter 7.

1.11.2 Quality of Life. An additional area of concern with environmental values is in the newly developing interest in measurement of the "Quality of Life" (QOL). The term Quality of Life is truly undefined, yet people discuss the issue of whether or not the "quality of life" is improving or deteriorating. To the question: Is the society "better off" or "worse off" now than it was this time last year, or the year before, or in the "Roaring Twenties," or "Gay Nineties"? there is no answer. Nevertheless, there are some initial efforts being made to develop some measurements of just what it is

²⁴The Technology Assessment Act of 1972, Public Law 92-484, October 13, 1972, 86 Stat. 797 et seq.

that we refer to as the "quality of life." Inherent in any such measurement is consideration of environmental values. Accordingly, it is relevant to examine the QOL efforts as part of this study, and the subject is dealt with in Chapter 7.

1.11.3 Social Auditing. Finally, there is the question of the public's concern with the "social responsibility of business." American industry is faced more and more with demands from the public to operate in such a manner as to exhibit a social consciousness rather than simply in pursuit of profit without regard to negative externalities. Corporate executives must now take into account the public's response to activities which may be environmentally degrading. To be sure, most such activities are subject to EPA control in the form of requirements to comply with a wide range of environmental standards. Nevertheless, a company which values the good-will and confidence of the public will want to assess its plans in the light of current values of society, even in those cases where a legal compulsion to do so may not exist.

Whether motivated by a desire to satisfy critics or simply as an extension of a genuine social consciousness, some firms have recently initiated efforts to account for their socially responsible activities. Such accounting efforts have come to be labeled as "social auditing," and the process is certain to entail utilization of information developed in a company's EIS process. As in the case of the QOL concept, the issue of "social auditing" is one which bears at least a

cursory examination because of the potential contribution of the EIS process to its further development. This subject will also be examined in Chapter 7.

1.12 Summary. In the preceding pages a number of problems related to the environmental impact analysis process were identified. The legal requirements that exist for making environmental assessments have been explored. It was seen that NEPA-type requirements exist at both the Federal and State levels of government, and that they affect both the public and private sectors of the economy.

A second area of legislative concern with the environmental assessment process, that of Technology Assessment, was identified.

In addition to problems arising from legislative requirements, two emerging concepts which promise to have wide impact on public and private administrative practices were discussed. These were the concepts of "quality of life," and "social auditing." Both of these entail aspects of quantifying essentially qualitative variables and both, to a degree, will involve utilization of information which is developed in connection with environmental analyses.

The problems and issues discussed above indicate several needs of administrators in both the public and private sectors:

- a. need for guidance in satisfying the environmental impact statement requirements of the National Environmental Policy Act of 1969 and of similar legislative requirements at the State level,

- b. need for knowledge of the costs involved in the preparation of an environmental impact statement in order that budgetary procedures may be improved and consideration of such costs may be given in any policy review of the existing requirements,
- c. need for clarification of responsibilities and procedures involved in protection of the environment during project implementation,
- d. need for understanding of the role of environmental impact analyses in Technology Assessment, a new imperative for such analyses,
- e. need for understanding of the possible contribution of environmental impact analyses in development of a "quality of life" measurement, and
- f. need for understanding of the possible contribution of environmental impact analyses in the conduct of a "social audit."

CHAPTER 2

HYPOTHESIS AND OBJECTIVES OF STUDY

2.1 Objectives of the Study. This study was designed to satisfy the need of public and private sector administrators for guidance, knowledge, and understanding on several aspects of environmental management. Specifically, the study deals with three major and with three secondary objectives. The major objectives are to:

- a. provide information on the environmental impact analysis procedures of the Environmental Protection Agency as a source of guidance in satisfying the National Environmental Policy Act of 1969 and of similar legislative requirements at the State level,
- b. provide knowledge of the costs involved in the preparation of an environmental impact statement in order that budgetary procedures may be improved and consideration of such costs may be given in any policy review of existing requirements, and
- c. provide information to policy makers about the nature and scope of guidance needed by agencies for clarification of responsibilities and procedures involved in protection of the environment during project implementation.

The secondary objectives are to:

- d. provide information about the process of Technology Assessment in order to gain understanding of the role of environmental impact analyses in a newly developing area of public policy,
- e. provide information about the current efforts being made to develop "quality of life" measures in order to gain understanding of the possible contribution of environmental impact analyses in development of such measures, and

- f. provide information about the emerging concept of "social auditing" in order to gain understanding of the possible contribution of environmental impact analyses in the conduct of a "corporate social audit."

2.2 Hypothesis. Procedures have not been developed to insure environmental protection during project implementation. The assumption that environmental values will be protected if all Federal agencies are required to give consideration to such values in their project planning activities is explicit in the 102 requirements of NEPA and implementing directives. The nature of legal actions brought under NEPA to this date and the absence of guidance concerning environmental protection procedures during project implementation led to the suspicion that adequate procedures had not been established which would insure compliance with measures identified during the EIS process as necessary to the protection of the environment.

2.3 Questions Related to the Research. In the process of satisfying the research objectives of the study, answers to several questions were obtained, such as:

1. How many EIS's were completed by the various agencies in EPA's Region IV (the eight Southeastern States) during the period January 1, 1972 through December 31, 1972 (the period forming the population of EIS's sampled)?
2. What types of Federal actions in Region IV were subjected to the EIS process during the sample period?

3. What were the major deficiencies of environmental impact statements selected for analysis?
4. What was the educational and experience background of individuals responsible for the preparation and review of environmental impact statements?
5. To what extent were consultants involved in the preparation of environmental impact statements?

CHAPTER 3

RELATED RESEARCH AND IMPORTANT LITERATURE

3.1 Related Research. Several studies which have relevance to this study are discussed below.

3.1.1 General Accounting Office Studies. Two studies were conducted by the GAO at the request of the Chairman of the House Subcommittee on Fisheries and Wildlife Conservation. The Chairman of this committee, Mr. John D. Dingell, was the House sponsor of NEPA. The first report examined whether or not section 102 was being implemented uniformly and systematically, and considered the roles of the CEQ, EPA, and the Office of Management and Budget (OMB), in providing guidance and assistance to seven agencies selected for review.¹ The seven agencies were the Corps of Engineers, Forest Service, Soil Conservation Service, Department of Housing and Urban Development, Bureau of Reclamation, Federal Aviation Administration, and the Federal Highway Administration. The study did not attempt to determine the costs of preparing EIS's. It examined the EIS review

¹Comptroller General of the United States, Report to the Subcommittee on Fisheries and Wildlife Conservation, Committee on Merchant Marine and Fisheries, House of Representatives, "Improvements Needed in Federal Efforts to Implement the National Environmental Policy Act of 1969," (Washington, D.C., May 18, 1972).

processes of EPA, but did not explore its EIS preparation procedures because it was not preparing impact statements at the time of the study.

The second study examined the adequacy of six impact statements.² The statements reviewed in the study indicated that agencies were concerned about the environmental impacts of their projects, but the statements shared three common problems:

- inadequate discussion of, and support for, the identified environmental impacts.
- inadequate treatment of reviewing agencies' comments on environmental impacts
- inadequate consideration of alternatives and their environmental impacts.

Results of these studies are analyzed in Chapter 6 of this research.

3.1.2 Andrews Study. Richard N. L. Andrews compared the effects of NEPA from its enactment on January 1, 1970, through October 1971, on the programs of four agencies: the civil works programs of the Corps of Engineers, the Small Watersheds Program of the Soil Conservation Service, the water resource development program of the Tennessee Valley Authority, and the nuclear reactor licensing program

²Comptroller General of the United States, Report to the Subcommittee on Fisheries and Wildlife Conservation, Committee on Merchant Marine and Fisheries, House of Representatives, "Adequacy of Selected Environmental Impact Statements Prepared Under the National Environmental Policy Act of 1969," (Washington, D. C., November 27, 1972).

of the Atomic Energy Commission.³ His study noted differences in the procedures of those agencies and concluded that further progress in realizing the aims of NEPA would depend on maintaining public access to agency decision making processes and in improving the process of evaluating environmental impacts.

3.1.3 Fraser Study. A study by Stephen A. Fraser examined citizen participation in decision making in the programs of four agencies: the Selective Service System, the Bureau of Land Management, the Office of Economic Opportunity, and the Department of Housing and Urban Development.⁴ He challenged the position of advocates who claim that the democratic process is strengthened through citizen participation involving greater local access to Federal administrators. He presents evidence to suggest that such participation involves commitments to participatory boards or units which lead to interagency conflicts.

³Richard N. L. Andrews, "Environmental Policy and Administrative Change: The National Environmental Policy Act of 1969, 1970-1971," (Ph.D. diss., University of North Carolina at Chapel Hill, 1972).

⁴Stephen A. Fraser, "Citizen Participation in Decision-Making by Federal Agencies: Selective Service System, Bureau of Land Management, Office of Economic Opportunity, Department of Housing and Urban Development," (Ph.D., diss., The Johns Hopkins University, 1969).

3.1.4 Coates Study. A study by Vary T. Coates on the process of Technology Assessment in the Federal government is relevant from two perspectives.⁵ First, it is a comprehensive study of the Technology Assessment process. Thus, it provides valuable reference material for that portion of this study which deals with Technology Assessment (TA). Second, the study contains a brief examination of fourteen environmental impact statements, which provides some basis for brief comparative analysis.

3.1.5 Dilley Study. Steven C. Dilley's study on "social auditing" provides an application-oriented treatment of the concept in accounting for the social responsibility of a gas-electric public utility in relation to the firm's environmental activities.⁶ Additionally, the study provides useful definitions of the terms "social audit," "social responsibility," and "socially relevant activities."

3.1.6 The Conference Board Study. The Conference Board reported in a 1970 study the results of a survey of

⁵Vary T. Coates, "Technology and Public Policy: The Process of Technology Assessment in the Federal Government," (Ph.D. diss., The George Washington University, 1972).

⁶Steven C. Dilley, "Accounting for Externalities: Conducting a Social Audit and Preparing a Social Responsibility Annual Report for a Public Utility," (Ph.D. diss., The University of Wisconsin, 1972).

organizational practices for pollution control in 174 firms in pollution-prone industries.⁷ The portion of the study which is most relevant here pertains to the occupational background of the person in charge of pollution control. The results of the study are compared with the findings here concerning the occupational background of those individuals involved in preparing and reviewing EIS's. The Conference Boards findings of interest show that:

- a. two out of three companies responding indicate the pollution control executive has had "many years of experience" in his field,
- b. the pollution control executive usually has an engineering degree, and is a chemical engineer in (24) out of 67 firms reporting, and
- c. position guides call for competence in both technical and administrative matters as well as the ability to communicate effectively with corporate and operating management.⁸

3.2 Important Literature in the Field. In addition to the works cited in paragraph 3.1 above, the following basic works served as important references throughout much of this study:

3.2.1 Environmental Quality. This is the annual report of the CEQ to the President. This report is one which is required under Section 201 of NEPA. Three such reports have been presented in August of 1970, 1971, and 1972

⁷The Conference Board, Corporate Organization for Pollution Control (New York: The Conference Board, Inc., 1970).

⁸Ibid., adapted from unnumbered introductory highlights and p. 14.

respectively.⁹ These reports cover a variety of issues related to implementation of NEPA and contain the President's annual environmental message to the Congress of the United States. Of particular interest is the information provided on legal aspects of environmental policy, both at the Federal and State levels.

3.2.2 102 Monitor.¹⁰ This is a monthly summary of items of interest concerning developments related to the 102 requirements of NEPA. Included is a report of environmental impact statements filed with the CEQ during the period and categorized by State affected by the project.

3.2.3 Guidelines for Statements on Proposed Federal Actions Affecting the Environment.¹¹ This memorandum is the major source of CEQ guidance on implementing procedures to be followed by agencies. Appendix II contains a list of agencies with jurisdiction by law or special expertise to comment on various types of environmental impacts.

⁹Council on Environmental Quality, Environmental Quality--The First Annual Report of the Council on Environmental Quality (Washington, D.C.: Government Printing Office, August 1970). See also same author, Environmental Quality--The Second Annual Report of the Council on Environmental Quality, and Environmental Quality--The Third Annual Report of the Council on Environmental Quality, August 1971 and August 1972 respectively.

¹⁰CEQ, 102 Monitor (Washington, D.C.).

¹¹CEQ, "Guidelines for Statements on Proposed Federal Actions Affecting the Environment," 36 Federal Register, pp. 7724-29, April 23, 1971. The full text also appears as Appendix H in CEQ, Third Annual Report.

3.2.4 Environmental Law.¹² Authored by a Professor of Law, who is also Director of the Environmental Law Program of the National Law Center of The George Washington University, this book is a comprehensive treatment of legal interpretations of a variety of environmental cases. It includes appendixes containing the text of major decisions. It served as the primary legal reference source. Other legal interpretation references were drawn from the annual reports of the CEQ and the volumes listed below in Sections 3.2.5, 3.2.6, 3.2.7, and 3.2.12.

3.2.5 Environmental Rights and Remedies.¹³ This book is designed as a "practical handbook" aimed at introducing lawyers and others concerned with legal protection of the environment to the environmental sciences. It includes discussion and references to environmental legislation of several of the states which have adopted environmental laws.

3.2.6 Managing Our Urban Environment.¹⁴ Although this is a legally oriented text dealing largely with zoning issues, the author's analysis of selected environmental cases provides valuable insight into the legal bases for intervening in the management of the environment.

¹²Arnold W. Reitze, Jr., Environmental Law, 2d ed. (Washington, D.C.: North American International, 1972).

¹³Victor J. Yannacone, Jr., and Bernard S. Cohen, Environmental Rights and Remedies (Rochester, N.Y.: The Lawyers Co-Operative Publishing Co., 1972).

¹⁴Daniel R. Mandelker, Managing Our Urban Environment, 2d ed. (New York: The Bobbs-Merrill Co., 1971).

3.2.7 California Environmental Law: A Guide.¹⁵ This is a guide to major state laws regulating environmental quality in California. It is updated annually, and the latest edition includes amendments and new laws enacted by the 1971 legislature.

3.2.8 Environment: A Challenge to Modern Society.¹⁶ The author, Lynton K. Caldwell, is Professor of Government at Indiana University. Caldwell's testimony at hearings leading to enactment of NEPA is credited as influencing revisions to the proposed legislation to include the "action-forcing" provisions of the law.¹⁷ The book gives helpful insights into the development of environmental policy. The three chapters on Environmental Management as Applied Science, as a Public Function, and as an Ethical System respectively serve to illuminate the nature of "environmental management."

3.2.9 Review of Federal Actions Impacting the Environment.¹⁸ This is a manual of the Environmental

¹⁵Gerald R. Mylroie, Patricia A. Flanagan, and Randy Hey, California Environmental Law: A Guide, 2d ed. (Claremont: Center for California Public Affairs, 1972).

¹⁶Lynton Keith Caldwell, Environment: A Challenge to Modern Society (Garden City, New York: The American Museum of Natural History, The Natural History Press, 1970).

¹⁷CEQ, Third Annual Report, p. 222. See also Richard N. L. Andrews, "Environmental Policy," p. 87 and p. 106.

¹⁸EPA, "Review of Federal Actions Impacting the Environment," (Washington, D.C., November 30, 1972).

Protection Agency which establishes policies, procedures, and responsibilities for the Agency's review of Federal actions impacting the environment, including environmental impact statements prepared pursuant to NEPA and Federal actions encompassed by Section 309 of the Clean Air Act. It contains guidance for classifying agency impact statements on the basis of their adequacy, and it served as the primary basis for classification of impact statements selected for analysis in this study. Additionally, its Appendix A contains instructions concerning the assignment of identifying code numbers to impact statements received for review from submitting agencies.

3.2.10 Preparation of Environmental Impact Statements: Interim Regulation.¹⁹ The instructions contained in this memorandum establish EPA's guidance to its internal departments on the procedures to be followed in preparation of this agency's EIS's. These interim regulations amplify earlier guidance which was provided in January 1972.²⁰ This reference served as the primary instrument for analyzing EPA's procedures under the provisions of NEPA and CEQ's Guidelines. This author submitted three suggested minor changes of the interim regulations to EPA's Office of Federal Activities on February 13, 1973.

¹⁹EPA, "Preparation of Environmental Impact Statements," 38 Federal Register, pp. 1696-1712, January 17, 1973.

²⁰EPA, 37 Federal Register, p. 879, January 20, 1972.

3.2.11 Environment Reporter.²¹ This is a multi-volume loose-leaf collection of periodic "newsletters" which report on the latest developments in a wide range of environmental management areas. It was used primarily for information about legislative and judicial activities at the State level.

3.2.12 Environmental Impact Statement Guidelines.²² This is a manual prepared by the Region X office of the Environmental Protection Agency aimed at providing information to agencies requesting EPA review of EIS's. It contains a number of basic reference documents as appendices. Appendix J, "NEPA and the Courts," contains particularly helpful material on the legal issues dealt with in the study at hand.

3.2.13 Preparation of Environmental Impact Statements.²³ This is the CEQ's proposed revision to its existing guidelines (see reference 3.2.3 above). More comprehensive in scope than current regulations, the new guidelines reflect requirements imposed through recent judicial interpretations of NEPA.

²¹Bureau of National Affairs, Environment Reporter (Washington, D.C.)

²²EPA, Region X, Environmental Impact Statement Guidelines, rev. ed. (Seattle, Washington, April 1973).

²³CEQ, "Preparation of Environmental Impact Statements," 38 Federal Register, pp. 10856-10866, May 2, 1973.

3.3 Summary. It is apparent that rich sources of data were available for analysis. Those references cited above represent the major sources of secondary data which were drawn from in the execution of this study. Chapter 4 discusses the sources of primary data developed in the conduct of this research.

CHAPTER 4

RESEARCH PROCEDURES AND OUTLINE OF THE STUDY

4.1 General Methodology. The research that is reported in this study is in the general nature of what Daniel Katz has described as a "field study."¹ In discussing the relation of field studies to surveys, Katz noted two distinctions to be made:

...(T)wo essential distinctions can be made. In the first place, the survey always attempts to be representative of some known universe and thus attempts, both in the number of cases included and in the manner of their selection, to be adequately and faithfully representative of a large population. This emphasis on sampling may or may not be found in a field study, which is more concerned with a thorough account of the processes under investigation than with their typicality in a larger universe.² (emphasis added)

From the material presented in previous chapters, it is clear that the bulk of the research does satisfy Katz' categorization as a field study, at least on the basis of his first distinction. As for the second, Katz notes that the more important difference:

...is that in the field investigation we attempt to

¹Daniel Katz, "Field Studies," in Research Methods in the Behavioral Sciences, ed. Leon Festinger and Daniel Katz (New York: Holt, Rinehart and Winston, 1966), p. 57.

²Ibid.

study a single community or a single group in terms of its social structure--i.e., the interrelations of the parts of the structure and of the social interaction taking place. The survey, to the extent that it deals with such interrelations and interaction, does so through a study of the final outcome. The on-going social and psychological processes are inferred in the survey from their statistical end-effects. In the field study, however, attempts are made to observe and measure the on-going processes more directly....Thus, a field study will provide both a more detailed and a more natural picture of the social interrelations of the group than does the survey.³ (emphasis added)

Again we would classify the bulk of this particular research in the category of a field study. A portion of the study, however, did entail the selection of a sample of environmental impact statements from the population of "Final" impact statements completed by agencies in the eight Southeastern States comprising Region IV of the Environmental Protection Agency (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee). The EIS's, drawn on the basis of a "proportionate stratified random sample of elements" process, were subjected to both quantitative and qualitative analysis. To the extent that such a "survey" technique was employed, then, we can see that this study does entail both types of research methodologies.

It should be clear, however, that "the field study and (population) survey are not so much alternative ways

³Ibid., pp. 57-58.

of studying problems as they are supplementary procedures which can be used most effectively in combination."⁴ There are two advantages to using both methods in the same problem area:

...First, we know more about the degree of generality from the findings of the field study if we know how the specific situation studied fits into the (overall) pattern....Secondly, the (population) survey and the field study each produce findings for hypotheses which can be more adequately tested by use of the other approach.⁵

The research design employed in this study has been referred to as "exploratory" rather than "hypothesis-testing."⁶ In the former type of study, attempts are made:

...to see what is there rather than to predict the relationships that will be found....From its findings may come knowledge about important relationships between variables...

Ideally, the testing of hypotheses is more suited to laboratory experimentation, and exploratory discovery to field studies and surveys....(T)he great strength of the field type of study is its inductive procedure, its potentiality for discovering significant variables and basic relations that would never be found if we were confined to research dictated by a hypothetical-deductive model. Thus, the field study and the survey are the great protection in social science against the sterility and triviality of premature model building.⁷

⁴Ibid., p. 58.

⁵Ibid.

⁶Ibid., p. 74.

⁷Ibid., p. 75.

As was noted in Chapter 2, this study investigates a hypothesis concerning the lack of adequate procedures to protect the environment during project implementation. This combination of techniques is also discussed by Katz:

It is possible, of course, to combine both exploration and hypothesis-testing in a single field study. One major set of hypotheses can be investigated at the same time that other materials are gathered for exploratory purposes. This has the advantage of protecting the study from failure if inconclusive results are found with respect to the hypotheses. The exploratory materials then become the safety factor.⁸

Finally, the study carried out here was aimed at discovery of relationships among variables rather than one aimed at discovery of significant variables in the situation. The latter type of study frequently draws upon factor analysis techniques in an effort to identify the "unitary and independent" factors in the problem situation. The former type of study "resembles hypothesis-testing in resting its case upon relationships discovered rather than upon the precise use of mathematical techniques."⁹ In discussing the major difference between such a study and the hypothesis-testing investigation, Katz noted that:

...in the former there are no specific predictions of relationships based upon theoretical derivations. The researchers do have hypotheses in mind, but these are not precisely formulated....Within the broad frame set by our research objective, we hope to find some significant relationships.¹⁰

⁸Ibid.

⁹Ibid., p. 77.

¹⁰Ibid.

4.2 Specific Research Operations. The specific research activities performed in this study were determined by the nature of the objectives which were established. The three major objectives were achieved through primary research involving interviews and correspondence with public officials involved in the preparation and review of EIS's; analysis of all Final impact statements prepared by EPA's Region IV staff as of June 1, 1973; and analysis of a sample of Final Environmental Impact Statements completed by other agencies throughout Calendar Year 1972. Additional data in support of the major objectives was drawn from the secondary sources discussed in Chapter 3.

Secondary sources were relied upon almost exclusively for accomplishment of the three secondary objectives. The major exception, however, was the use of information obtained in two personal interviews with the House sponsor of the Technology Assessment Act of 1972, Representative John W. Davis of Georgia's Seventh District. The first interview was held on January 15, 1972, prior to passage of the Act. The second was held April 24, 1973, which was subsequent to the formation of the Technology Assessment Board and its first organizing meeting.

The following subsections of this chapter describe the sampling plan which was followed, the data collection instruments employed, and the data analysis performed.

4.2.1 The Sampling Procedure. The sampling plan

used to select the EIS's for analysis was based on the criterion that the sample drawn by following the plan should be representative of the population. This criterion was satisfied here by drawing the sample on the basis of the well-known "proportionate stratified random sample of elements" ¹¹ process, hereafter referred to as proportionate sample. The "frame" for drawing the sample was developed from EPA's Region IV log of EIS's received for comment during Calendar Year 1972. This particular period was selected for study because comprehensive files of EIS's completed by the various agencies in the southeastern region were fully organized by the beginning of CY 1972.

The period selected offers the advantage that projects selected for analysis were, for the most part, undergoing the EIS process subsequent to the GAO, Andrews, and Coates studies which were discussed in Chapter 3. This afforded the opportunity for some comparative analysis with their findings. The disadvantage, however, is that procedures are subject to such rapid modification that many agencies report that costs estimated in connection with the sample projects are one-half to one-third of current costs.

The EPA log was used to identify the Final EIS's by originating agency. The proportion of the total number

¹¹Leslie Kish, Survey Sampling (New York: John Wiley & Sons, Inc., 1965), p. 83.

of Final EIS's from a particular agency was used to determine that agency's proportion of the sample. The selection of the sample elements within each strata was accomplished by "systematic selection" after a random start.¹²

4.2.2 Research Instruments. Primary data was collected using three research instruments. Each of these is described in the following subsections.

4.2.2.1 Agency Questionnaire. Appendix A is a letter "questionnaire" to Federal agency officials which was designed to obtain information in connection with the hypothesis of this study concerning agency "follow-up" procedures. It was mailed to the agency officials designated in the CEQ Guidelines¹³ as the individuals to be contacted for "coordinating comments upon environmental impact statements." The Guidelines do not list the Department of Justice, Federal Trade Commission, Federal Communications Commission, Interstate Commerce Commission, National Aeronautics and Space Administration, or the Water Resources Council. In these cases, the letter was sent to the Chairman, Administrator, or Director who was listed in the

¹²Ibid., p. 85.

¹³CEQ, "Guidelines for Statements on Proposed Federal Actions Affecting the Environment," 36 Federal Register, pp. 7724-7729, April 23, 1971.

United States Government Organization Manual.¹⁴ In the case of the Environmental Protection Agency, it was sent to the current coordinator of EIS's.

Appendix C contains the list of recipients of the letter as well as the names of the respondents of each agency and Appendix D contains written agency replies.

It will be noted that Appendix A contains no indication of the purpose of the inquiry. This fact was not considered to be significant in determining whether an agency would or would not reply. Nevertheless, the research plan provided for a follow-up letter to non-respondents after a period of thirty days. The follow-up letter is attached as Appendix B. It was more personal in nature and identified the purpose of the questions. If an agency failed to respond to either Appendix A or B, the information was obtained during a telephone interview with an agency official.

The initial response rate to Appendix A was 61.5%. Following distribution of Appendix B, the total response rate had risen to 80.8% within an additional thirty day period. Telephone contact with the remaining non-respondents brought the total response rate to 100%.

4.2.2.2 Environmental Impact Statement Data Sheet.

Appendix E is the list of EIS's drawn in the sample for analysis and Appendix F is a two-part data collection form which was

¹⁴Office of the Federal Register, United States Government Organization Manual-1972/1973 (Washington, D. C.: Government Printing Office, July 1972).

used to standardize the data collection from the sample. The first part of the form was completed based on review of the various impact statements in the sample. The second part was completed on the basis of interviews with officials of the originating agencies or through correspondence following initial telephone contact. Appendix G contains the names of individuals interviewed or corresponded with in connection with the second part of Appendix F.

The form and content of Appendix F were dictated by the research objectives. Portions were adapted from an EPA form currently in use in connection with a study of EIS review procedures.

4.2.2.3 Biographical Questionnaire of EPA Regional Personnel. Appendix H is a biographical questionnaire which was sent to each of the ten regional offices of EPA. The purpose of this instrument was to gather data on the experience and educational background of EPA employees who have actually been involved in the preparation of EIS's. The findings are compared to the results of The Conference Board inquiry into the occupational background of the individual in charge of pollution control in certain private industries.¹⁵ This analysis is reported in Chapter 6.

4.2.3 Analysis of Results. The analysis of results involved both qualitative and quantitative aspects. The qualitative aspect included a thorough description of the EIS

¹⁵The Conference Board, Corporate Organization for Pollution Control (New York: The Conference Board, Inc., 1970).

process, with particular attention given to the procedures of the Environmental Protection Agency. The quantitative aspect was handled on the basis of descriptive measures.

4.3 Outline of the Study. The remaining chapters of this study present the results of the study carried out under the original research design. Chapter 5 deals with the development and implementation of public environmental policy. It contains a brief treatment of various theories which have been introduced concerning the man/environment relationship.

The legislative development of the National Environmental Policy Act is discussed, including its major provisions. Another section of Chapter 5 is concerned with the formation and role of the Council on Environmental Quality. The creation of the Environmental Protection Agency and its functions are examined. The role of the courts in enforcing provisions of NEPA is reviewed. The chapter includes a brief comparative study of various environmental impact statement requirements under state laws. Emphasis is given to the California regulations and experience. The chapter concludes with a discussion of a previously unexplored area of environmental policy which is concerned with agency "follow-up" procedures.

Chapter 6 deals with the environmental impact statement process at the federal agency level. The Council on Environmental Quality guidelines for the preparation of such statements are analyzed. The regulations of the Environmental Protection Agency pertaining to EIS's are discussed. An analysis of EIS activities of Federal agencies in the

Southeastern United States is presented. The results of the biographical questionnaire are presented.

Chapter 7 contains information about three related aspects of environmental management. The emerging process of Technology Assessment is examined. Current developments in the area of "Quality of Life" measurement are explored. The "Social Audit" concept is also briefly discussed.

The concluding chapter, Chapter 8, presents a recap of major findings and recommendations for improving environmental management practices.

CHAPTER 5
DEVELOPING AND IMPLEMENTING PUBLIC
ENVIRONMENTAL POLICY

5.1 Introduction. The purpose of this chapter is to examine the development and implementation of public environmental policy. The examination consists of a brief analysis of the man/environment relationships which have characterized different eras of man's habitation of the earth. The legislative development of the National Environmental Policy Act of 1969 (NEPA)¹ is reviewed. The major provisions of NEPA are examined, including the role of the Council on Environmental Quality (CEQ). The major institutional "invention" for implementing environmental policy, the United States Environmental Protection Agency (EPA), is examined briefly.

The role of the courts in enforcing provisions of NEPA is considered. Environmental protection activities at the State level are examined. The final area of investigation is concerned with the results of a survey of agency "follow-up" procedures.

5.2 Theories of the Environmental Basis of Society. The current public interest in environmental issues is but a reflection of society's concern with man's relationship to the world in

¹The National Environmental Policy Act, Public Law 91-190; 83 Stat. 852 et seq; 42 USC 4321-4347.

which he finds himself. The perception of the relationship between man and his world has varied at different times and places throughout history. It is the purpose of this section to examine several of the theories of the man/environment relationship which have influenced man's behavior in an effort to comprehend current developments in environmental administration. First, however, it will be useful to clarify what is meant by environment and environmental administration.

5.2.1 Meaning of Environment and Environmental Administration. For purposes of this discussion, the meanings developed by Lynton K. Caldwell in his book Environment: A Challenge to Modern Society are applicable. Caldwell interprets environment in a broader sense than the simple generic sense derived from a dictionary definition, which describes environment as "the aggregate of surrounding things, conditions, or influences."² Thus, the concept of environment, to him:

...assumes not only "surrounding things" but something that is surrounded -- in our purview, man.... Environment is not only the complex, interrelating reality surrounding us; it includes us. But our environment is not the same as our perception of it. The "real" environment includes much more than we sense in our ordinary, day-to-day surroundings. Yet we are in continuing interaction with this total environment in varying degrees of directness and intensity. And so "environment"...may best be understood as shorthand for man/environment relationships.³

²Lynton Keith Caldwell, Environment: A Challenge to Modern Society (Garden City, N.Y.: The American Museum of Natural History, The Natural History Press, 1970), p. 4.

³Ibid., pp. 4-5.

Likewise, the concept of environmental administration involves a multi-faceted definition. Again, it is Caldwell's meaning which is accepted here, and to him the emerging concept of environmental administration:

...is a convenient word/symbol representing at least two distinguishable but related meanings. First, the term represents the policies, methods, and processes by which man shapes his environments; second, it refers to the control of human action in relation to the environment. The expression "environmental administration" suggests an attempt to deal with environments comprehensively, as environments, in contrast to focusing upon their component parts. In the first sense, we have always had environmental administration. In the second sense, we have a concept that carries profound social and political implications. 4

These meanings of environment and environmental administration serve well to examine several of the theories of the environmental basis of society which have been developed in the past as well as to understand the currently popular ecological theories which underlay present developments in environmental administration.

5.2.2 Anthropogeographic Theories. An excellent survey of theories of environmental influences on individual and social life in terms of the geographic environment is presented by Franklin Thomas in his book The Environmental Basis of Society.⁵ His study of various theories of geographical factors in social causation was not aimed at developing an original theory

⁴Ibid., p. 16.

⁵Franklin Thomas, The Environmental Basis of Society (New York: The Century Company, 1925).

of geographic influence, "but simply to present systematically the major contributions to the subject, and to indicate, to some extent at least, the merits and defects of these contributions."⁶ Thomas presents a thorough review of important works dealing with the general influence of the physical environment on history. He examines the major theories based on climatic influences on man's development, the influence of natural resources, the social importance of location and accessibility, and direct psychological influence from the natural surroundings. In each case, the close relationship between man and his physical environment is the focus of attention, but, unlike the modern ecological view, these theories tend to treat man and his environment as separable entities. In summary, Thomas noted that:

Several of the theories...have stood the test of ages, enduring in some instances with little alteration from ancient times to the present. That the peoples of the middle latitudes, or temperate zones, are superior to their brethren both to the north and to the south; that man needs opposition from his environment to bring out the best that is in him; that there has been an orderly progressive shifting of the center of highest civilization throughout the course of history; that geographic factors are more important in primitive society and that with the advance of civilization the importance of psychological and cultural factors increases; and that isolation and accessibility are correlated with cultural growth and diversification, are views which have been expressed by writers of various nationalities, experiences and walks of life, under a variety of historical and cultural circumstances. Whatever scientific validity these theories may or may not possess they have shown a vitality which entitles them to more than passing consideration. 7

⁶Ibid., p. 3.

⁷Ibid., pp. 307-308.

5.2.3 Religious Views of Man/Environment Relations. A very influential view of the nature of the man/environment relationship based on a theological perspective has been put forth by a contemporary historian, Lynn White, Jr. In a popular lecture delivered at a meeting of the American Academy for the Advancement of Science, he suggested that the roots of the "ecologic crisis" are religious in nature. He proposed a theory that modern science and technology have enabled man to so totally master his environment and that these are Occidental heritages which grew out of Judeo-Christian attitudes.⁹ Fundamental to this religious view is the biblical notion that God created man and ordered Adam and Eve, according to Genesis 1:28, to: "Be fruitful, and multiply, and replenish the earth, and subdue it: and have dominion over...every living thing..."

Such a philosophical view of the man/environment relationship permits efforts by man to subjugate nature to his will, i.e., to achieve mastery over his environment in an ongoing struggle between man and nature. This view permitted man to be viewed as separable from his earthly environment, a point which is clearly outlined by Caldwell:

Religious thought, and especially, Christianity, has tended to separate man from his earthly environment, but not from an environment of some kind. The separability of man from Earth was a theological concept, and the universality of a tolerable, although not necessarily agreeable, environment was assured by divine intent. Wherever there were men, whether on Earth, in heaven, or in hell, there was an environment in which the human personality, in some form,

⁹Lynn White, Jr., "The Historical Roots of Our Ecologic Crisis," Science, March 10, 1967, pp. 1203-1207. Lecture delivered December 26, 1966 at the Washington meeting of the AAAS.

could exist. The separability of man from the earthly environment was, however, seldom joined to the equally valid proposition that the Earth was separable from man. Theologies pictured the world as created for man; they had no reason to postulate environments or, more precisely, natural conditions totally unrelated to man or to his destiny. ¹⁰

White's theory that Judeo-Christian attitudes are to be held responsible for technology and the ecologic crisis is considered by René Dubos to be "at best a historical half-truth."¹¹ This noted scientist has observed that:

...Erosion of the land, destruction of animal and plant species, excessive exploitation of natural resources, and ecological disasters are peculiar neither to the Judeo-Christian tradition nor to scientific technology.

The process began some 10,000 years ago, long before the Bible was written....¹²

Dubos cites numerous examples of environmental destruction which occurred before man came under the influence of Judeo-Christian doctrine and in oriental regions, where White had suggested that man was more closely in harmony with nature as a result of the oriental religious teachings that man is a part of nature.

The fact of environmental degradation in ancient China is clearly established by Yi-Fu Tuan in an article which explores the widely-held western belief that Orientals have always had more respect for their physical environment than their Occidental

¹⁰Caldwell, Environment, pp. 75-76.

¹¹René Dubos, "St. Francis Versus St. Benedict," Psychology Today, May 1973, p. 56. Reprinted from René Dubos, A God Within (New York: Charles Scribner's Sons, 1972).

¹²Ibid.

contemporaries.¹³

The White hypothesis has also been challenged by Lewis W. Moncrief, who maintains that "all White can defensibly argue is that the West developed modern science and technology first."¹⁴ Moncrief counters with an argument that, "at best, Judeo-Christian teaching has had only an indirect effect on the treatment of our environment."¹⁵ He develops two simple models of his and White's views, which are depicted in Figure 5-1.

In White's thesis, Saint Francis of Assissi is characterized as a "spiritual revolutionary" who "proposed what he thought was an alternative Christian view of nature and man's relation to it: he tried to substitute the idea of the equality of all creatures, including man, for the idea of man's limitless rule of creation. He failed."¹⁶ White concluded by suggesting that the solution to the ecologic crisis must be essentially based on a revised religious philosophy and by proposing Saint Francis as the ecologists' patron saint.

The Franciscan doctrine of "advocacy of the maintenance of undisturbed ecological systems and the preservation of endangered species relies on unconvincing arguments," according

¹³Yi-Fu Tuan, "Our Treatment of the Environment in Ideal and Actuality," in Dimensions of the Environmental Crisis, ed. John A. Day, Frederic F. Fost, and Peter Rose (New York: John Wiley & Sons, Inc., 1971).

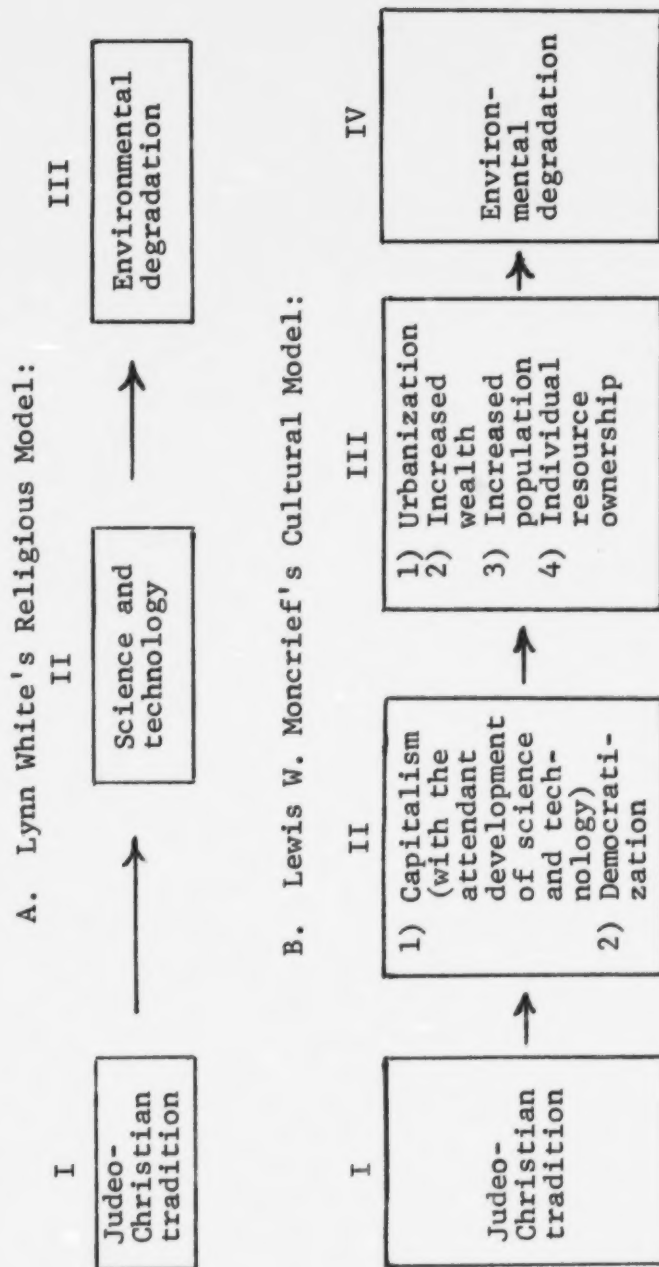
¹⁴Lewis W. Moncrief, "The Cultural Basis for our Environmental Crisis," in Fost, Dimensions of Crisis, p. 15.

¹⁵Ibid.

¹⁶White, "Historical Roots," p. 1207

Figure 5-1

Cultural Versus Religious Models of the Roots of Environmental Degradation



Source: Lewis W. Moncrief, "The Cultural Basis for Our Environmental Crisis," in *Dimensions of the Environmental Crisis*, ed. John A. Day, Frederic F. Fost, and Peter Rose (New York: John Wiley & Sons, Inc., 1971), p. 15.

to Dubos, who holds a pragmatic view of developments in nature.¹⁷ Dubos' basic argument is an ecological one, which is expressed as follows:

...Despite what the conservationists say, nature will go on even if whooping cranes, condors, or redwoods are exterminated....Environments...are not destroyed; they merely become different by evolving in directions determined by...challenges. Destruction always results in a different creation.

...(T)he ecological reality is a dynamic state; an environment never reaches biological equilibrium because natural and human influences continuously alter the interplay between the various components of the ecosystem. Final or stable communities are exceptional in nature and they are impossible wherever there is human activity. Every form of agriculture, even the most primitive form, involves the creation of artificial ecosystems. Since man has now transformed most of the temperate world, the balance of nature is a concept unrelated to existing conditions. 18

Whereas White had chosen Saint Francis as a good model to follow in protecting the environment, Dubos regards Saint Benedict of Nursia as a more appropriate example to follow. The Benedictine monks cultivated the soil, cleared forests, drained swamps, and achieved "such great fame in the control of malaria that they were entrusted with the task of draining the Roman Campagna."¹⁹ In praising the husbandry of the Benedictine orders, Dubos noted that:

All types of Benedictine monasteries, in fact, were involved in technological activities. The monks developed windmills and especially watermills as sources of power; power for the conversion of

¹⁷Dubos, "St. Francis Versus St. Benedict," p. 57.

¹⁸Ibid., pp. 57-58.

¹⁹Ibid., p. 60.

agricultural products into manufactured goods--leather, fabrics, paper, and even liqueurs such as Benedictine and Chartreuse. Thus these Medieval monasteries prepared the ground for the technological era in Europe.

...Throughout the history of the Benedictine order, its monks have active intervened in nature--as farmers, builders and scholars. The Benedictines have brought about profound transformation of soil, waters, fauna and flora, but in such a wise manner that their management of nature has proved compatible in most cases with the maintenance of environmental quality. To this extent, Saint Benedict is much more relevant than Saint Francis to human life in the modern world, and to the human condition in general. 20 (emphasis added)

The arguments of Dubos concerning ecological reality are closely related to the modern view of the man/environment relationship. Indeed, the ecological view is embodied in NEPA as the basis on which environmental management should be undertaken. This ecological view of the environmental basis of society is examined in the following section.

5.2.4 The Ecological View of Man/Environment Relations.

In contrast to the separability of man from his physical environment permitted under religious theories, the ecological view holds man to be an integral part of nature. Man is a participant in the evolutionary process, affecting and affected by his environment. Interrelated with all living and inanimate objects, man is viewed as dependent on nature for his continued survival.

The purpose of this section is not to present a comprehensive treatise on ecology, but to briefly explore the nature of ecological systems in order to more fully comprehend the

²⁰Ibid.

environmental management philosophy incorporated in NEPA.

5.2.4.1 The Nature of Ecological Systems. All organisms share a common evolutionary history. In addition to relationships arising through such a common history, Edward J. Kormondy discusses "kinships that develop from satisfying the requisites for the continuance of life and kind -- food, shelter, moisture, respiratory gases, mates, etc."²¹ The elements of an ecological system are succinctly captured by Kormondy in this passage:

Ecological relationships are manifested not in a vacuum but in physico-chemical settings, sets of nonliving or abiotic environmental substances and gradients. These include basic inorganic elements and compounds such as water and carbon dioxide, calcium and oxygen, carbonates and phosphates, and an array of organic compounds, the by-products of organism activity or death. They also include such physical factors and gradients as moisture, winds, currents, and solar radiation with its concomitants of light and heat. It is against this abiotic backdrop that the biotic components -- plants, animals, and microbes -- interact in a fundamentally energy-dependent fashion. The abiotic physico-chemical environment and the biotic assemblage of plants, animals, and microbes comprise an ecological system, or ecosystem, in which ecological kinship is demonstrated.²²

This brief description of an ecosystem makes clear the high level of interrelatedness of man in his ecosystem with all other abiotic and biotic elements. From an ecological perspective, man is not separable from his physical environment, but exists in the context of a vast array of interactions

²¹Edward J. Kormondy, "The Nature of Ecosystems," in Society and Environment: The Coming Collision, ed. Rex R. Campbell and Jerry L. Wade (Boston: Allyn and Bacon, Inc., 1972), p. 40.

²²Ibid.

which satisfy his own needs for survival.

The ecosystem concept is developed by Caldwell as one of several approaches to environmental analysis and control.²³ He sees the ecosystem approach to environmental management as very complex and difficult to translate into action.

The ecosystem is scientifically the most fundamental concept for environmental analysis and control. To approach environments as ecosystems means that the totality of the interacting entities and systems, physical and social, that comprise every environment must be taken into account in any decision regarding the environment. The ecosystem approach is also the most complex, and is the least easily translated into public policy and action. Men have found it easier to "think down" to the assumed limits of their ability to handle complexity rather than to "think up" to the complex realities of the natural world. ²⁴

The ecosystems concept has been retarded in the past by the complexity of the data and by the fact that the "non-ecological method and content of pedagogical practice in the United States has ill prepared the people to think in ecological terms."²⁵ The dramatic impact of space exploration on man's conceptual vision of Earth represents a significant contribution in overcoming previous difficulties in thinking in ecological terms. The ecological concept is easily grasped in terms of an analogy of Earth as a "Spaceship." This analogy is examined in the following subsection.

²³Caldwell, Environment, pp. 17-20. The other two approaches considered are the "problem shed" and "Ekistics," or science of human settlements, theory developed by the prominent environmental and urban planner, C. A. Doxiadis.

²⁴Ibid., p. 19.

²⁵Ibid.

5.2.4.2 The "Spaceship Earth" Paradigm. The significance of space exploration in generating wide spread awareness of the ecological view is emphatically expressed in the following passage:

...Probably pictures of earth from space did more than anything else to convince people that the earth is a tiny planet covered with a thin sheet of life-giving air and orbiting in hostile nothingness. If so, then this idea alone was perhaps worth the cost of all space exploration, because it may have saved mankind from extinction by irreversible pollution.²⁶

The analogy of earth as a spaceship gained early prominence when Adlai Stevenson used it in a widely hailed speech during a 1965 session of the Economic and Social Council of the United Nations. He was speaking out in favor of joint action for development, and the Official Records of the Council report the substance of his message:

...Just as Europe could never ainga (sic) be a closed community after the voyages of Columbus, the world could never again be a squabbling band of nations before the awful majesty of outer space. All men travelled together, passengers on a little spaceship, dependent on its vulnerable reserve of air and soil; all committed for safety to its security and peace; preserved from annihilation only by the care, the work, the love given to that fragile craft. ²⁷

²⁶ Keith Davis and Robert L. Blomstrom, Business, Society, and Environment: Social Power and Social Response, 2d ed. (New York: McGraw-Hill Book Company, 1971), p. 335.

²⁷ Adlai Stevenson, United Nations Economic and Social Council, Official Records - Thirty-ninth Session, 1375th meeting, July 9, 1965, p. 90.

The view of earth as a closed sphere was further developed by the noted economist, Kenneth E. Boulding, in a paper delivered at the Sixth Resources for the Future Forum, which was held in 1966.²⁸ Boulding noted that we were in the middle of a transitional process in the nature of man's image of his relationship to his environment. Man was gradually shifting from the earlier view of himself as living on a "virtually illimitable" plane to the full acceptance of the fact that it is indeed a spherical earth and that he operates in a closed environment. After a brief discussion of "system" characteristics, Boulding turns to consideration of the difference in economic principles between the closed earth in the future and the open earth in the past. He characterizes the latter as the "cowboy economy" because the cowboy is "symbolic of the illimitable plains and also associated with reckless, exploitative, romantic, and violent behavior, which is characteristic of open societies."²⁹ The closed economy of the future is characterized as the "spaceman" economy, in which the earth is viewed as "a single spaceship, without unlimited reservoirs of anything, either for extraction or for pollution, and in which, therefore, man must find his place in a cyclical ecological system which is capable of continuous reproduction of material form even though it

²⁸Kenneth E. Boulding, "The Economics of the Coming Spaceship Earth," in Environmental Quality in a Growing Economy, ed. Henry Jarrett (Washington, D.C.: Resources for the Future, Inc., 1966). Originally delivered at the RFF Forum on Environmental Quality held in Washington March 8 and 9, 1966.

²⁹*Ibid.*, p. 9.

cannot escape having inputs of energy."³⁰

The "spaceship earth" paradigm is developed at some length by Caldwell, who explores the essential ideas that the spaceship integrates into a single comprehensible image. These essential ideas are that:

The spaceship (Earth) is a unified system dependent upon the co-ordinated and continued functioning of interrelating systems and parts. It has surpluses, redundancy, and backup capacity, but its resources are nevertheless limited. Because carrying capacity is one of its limits, it must so far as possible recycle its resources unless it can obtain them at feasible cost from external sources. Changes in the system must be studied in relation to their total effects, because altered relationships among the parts, even intended improvements, may adversely affect the performance of the whole. Maintenance of the system and its subsystems must be watched, for failure at any critical point could lead to the destruction of the entire enterprise....

In the spaceship, we have, at last, an operational microcosm. It is not a true facsimile of the Earth, but in greatly simplified form, it illustrates relationships between man and his environment that are basic to his welfare and survival. Ecological facts that man prefers to evade on Earth are universally acknowledged for the spaceship....

Even persons insensitive to ecology might... be persuaded by the view from space to adopt a more responsible attitude toward the Earth. 31

An interesting connection between Boulding's ideas on the characteristics of the spaceman economy and contemporary developments on "Quality of Life" measurements, which are discussed in Chapter 7, is revealed in the following passage:

³⁰ Ibid.

³¹ Caldwell, Environment, p. 80, p. 82, and p. 85.

...The essential measure of the success of the (spaceman) economy is not production and consumption at all, but the nature, extent, quality, and complexity of the total capital stock, including in this the state of the human bodies and minds included in the system. In the spaceman economy, what we are primarily concerned with is stock maintenance, and any technological change which results in the maintenance of a given total stock with a lessened throughput (that is, less production and consumption) is clearly a gain. This idea that both production and consumption are bad things rather than good things is very strange to economists, who have been obsessed with the income-flow concepts to the exclusion, almost, of capital-stock concepts. ³¹

Whether one grasps the ecological reality through an understanding of scientific fundamentals or through the simple analogy of earth as a spaceship is unimportant from the standpoint of environmental protection. The important thing is that decision makers adopt such a view in reaching decisions affecting the environment. That such a view is the ideal intended by Congress in developing the National environmental policy will be made clear in the following section, in which the legislative development of NEPA is briefly reviewed.

5.3 Developing the National Policy. This section is concerned with the development of the United States' national environmental policy. The legislative background of NEPA is examined briefly and the major provisions of the Act are discussed, including the role of the Council on Environmental Quality.

5.3.1 Legislative Background of NEPA. The legislative history of NEPA has been traced in great detail by Andrews

³¹Boulding, "Economics of Spaceship Earth," pp. 9-10.

and also by Yannacone and Cohen.³² A brief review of the origins of NEPA may also be found in the CEQ's Third Annual Report and Reitze's book entitled Environmental Law.³³ The purpose of this subsection, therefore, is not to develop an original nor comprehensive treatise on NEPA's legislative history, but to note, as briefly as possible, the major aspects of its development in order to provide a suitable frame of reference for what follows in the remainder of this study.

5.3.1.1 Brief History. The major events in NEPA's development are captured in skeleton form in the Third Annual Report of the CEQ:

The written record of NEPA's passage through the Congress is relatively sparse in view of its later impact....

On February 17, 1969 a bill was introduced in the United States House of Representatives "to provide for the establishment of a Council on Environmental Quality." The following day, a measure with similar intent was introduced in the Senate. In the next 11 months the two bills received Congressional consideration, with bipartisan sponsorship and support...

...In the Senate on July 10, 1969, after a single day of hearings, it was placed on the consent calendar and passed by a voice vote. In the House, it reached the floor on September 23 and was passed that day by a vote of 372 to 15.

...On October 8, the Senate conferees from the Interior Committee and members of the Senate Public Works Committee reached agreement on the Senate's

³²See Richard N. L. Andrews, "Environmental Policy and Administrative Change: The National Environmental Policy Act of 1969, 1970-1971," (Ph.D. diss., University of North Carolina at Chapel Hill, 1972), pp. 76-109 and Appendix A. See also Victor J. Yannacone, Jr., and Bernard S. Cohen, Environmental Rights and Remedies (Rochester, N.Y.: The Lawyers Co-operative Publishing Co., 1972), Chapter 5.

³³See Council on Environmental Quality, Environmental

position in conference with the House. They also spelled out the relation of NEPA to a companion bill from the Public Works Committee that later became the Water Quality Improvement Act of 1970.

...A joint Senate-House conference committee reported an agreed version on December 17. After a brief discussion on the Senate floor of the effect of the proposed Act on other Federal laws relating to the environment, the Senate and House agreed to the conference report on December 20 and 23 respectively.

...The National Environmental Policy Act (NEPA) was signed into law by the President on January 1, 1970. It has become the basic policy-setting Federal law relating to protection of the environment. ³⁴

Those readers interested in specific elements of the above history may turn to Appendix I, which is a chronological list of important events in the legislative development of NEPA developed by Andrews. ³⁵

The version of NEPA's legislative history quoted above is sterile in its failure to render the flavor of the political intricacies involved in managing the two bills through the legislative process to final enactment as a law of the land. Andrew's analysis, on the other hand, develops the human drama behind the cold events cited above, and reveals the extent of political manipulation and compromise entailed in the genesis

Quality--The Third Annual Report of the Council on Environmental Quality (Washington, D.C.: Government Printing Office, August 1972), pp. 221-223. The October 8, 1969, compromise was an internal arrangement of the Senate, not with the House. As indicated, the joint version was reached later. See also Arnold W. Reitze, Jr., Environmental Law, 2d ed. (Washington, D.C.: North American International, 1972), pp. One-1-One-3.

³⁴CEQ, Third Annual Report, pp. 221-223.

³⁵See footnote 32. Appendix I is a restatement of Andrews' analysis in direct chronological order.

of any Act, and NEPA in particular. The following subsection on the politics of NEPA, drawn from Andrews study, focuses on this very interesting aspect of NEPA's legislative history.

5.3.1.2 The Politics of NEPA's Development. Close reading of Andrews analysis of NEPA's legislative history indicates that it is a thoroughly researched scholarly effort. One feels justified, therefore, in accepting some of his personal observations on several of the major events leading up to enactment of the bill.

Political maneuvering seems to have been inherent in the bill's handling from the very outset. Thus, it is observed that Senate Bill 1075 (S. 1075), which was to become NEPA, was introduced by Senator Jackson as:

A bill to authorize the Secretary of the Interior to conduct investigations, studies, surveys, and research relating to the Nation's ecological systems, natural resources, and environmental quality, and to establish a Council on Environmental Quality. 36

The absence of a reference to a national policy was seen by Andrews as a source of speculation. He noted that:

One might conjecture that this omission was intended to forestall any controversy over committee jurisdiction between Jackson and Senator Muskie's Sub-committee on Air and Water Pollution of the Committee on Public Works, to whose virtual monopoly over environmental legislation Jackson's efforts posed a threat. A similar maneuver later took place in the House...to keep the bill in favorable hands. 37

³⁶U.S. Congress, Senate Committee on Interior and Insular Affairs, National Environmental Policy. Hearing on S. 1075, April 16, 1969 (Washington, 1969), p. 1. Quoted from Andrews, "Environmental Policy," p. 85.

³⁷Andrews, "Environmental Policy," p. 84.

After the bill was referred to Jackson's committee, he introduced an amendment to add a statement of national policy. Andrews speculates further on the political motives involved in the bill's development by commenting, with regard to the amendment, that:

...one possible explanation of Jackson's reticence in introducing this policy statement is that he intended to all along, but held back until the bill was committed to his committee's jurisdiction. Another possible explanation is the testimony of the Administration witnesses at the April meeting, who mildly opposed creation of a statutory Council on the grounds that the President had already established a Cabinet-level Council for the same purpose, but hinted that the President would welcome a Congressional policy statement on the environment. The record suggests that the Administration agreed not to oppose creation of the Council in return for inclusion of the policy statement. 38

Jackson's committee adopted his amendment, along with other "minor revisions," and reported the bill unanimously to the Senate. The bill was approved unanimously by voice vote and referred to the House on July 10, 1969. Instead of being immediately referred to a House committee, however, "it was held at the Speaker's desk until a similar bill originating in the House could be debated."³⁹ This action, too, was speculated upon by Andrews.

Assignment of it to a committee could have triggered a crippling jurisdictional dispute between the Merchant Marine and Fisheries Committee, which was sympathetic to NEPA and was in fact developing similar legislation, and Congressman Wayne Aspinall's

³⁸Ibid., p. 86.

³⁹Ibid., pp. 90-91.

Interior and Insular Affairs Committee, which was the House counterpart in jurisdiction (but not in its attitude toward NEPA) of Senator Jackson's committee. 40

The House Bill (H.R. 6750) had been introduced by Congressman John Dingell as a bill: "to amend the Fish and Wildlife Coordination Act to provide for the establishment of a Council on Environmental Quality, and for other purposes." The fact that the bill was not proposed as a new law, but simply as an amendment to the Fish and Wildlife Coordination Act raised additional questions of political motives in Andrews mind.

...The purpose of proposing the law in this way appears, like Jackson's proposal of S. 1075 as a law to add to the powers of the Secretary of the Interior, to have been a parliamentary subterfuge to retain committee jurisdiction over the bill's development in Dingell's own Fish and Wildlife Subcommittee. 41 (emphasis added)

Andrews does acknowledge, however, that:

...If the bill had not later been made a separate law by amendment, several agencies such as the Soil Conservation Service and the Tennessee Valley Authority (sic) might have escaped its purview, since these agencies were exempted from the provisions of the Fish and Wildlife Coordination Act (48 Stat. 401; 16 U.S.C. 661-666c). 42

Following seven days of hearings on H.R. 6750, Dingell's committee reported out a bill, H.R. 12549, which was almost

⁴⁰Ibid., p. 91.

⁴¹Ibid.

⁴²Ibid.

identical to the original bill. Following floor debate and several amendments from the floor, the House approved the bill by a vote of 372-15. Congressman Dingell had reached a prior agreement with Aspinall to accept two amendments by the latter. Both amendments were approved by the House. The first amendment proposed that the bill become a separate Act rather than simply an amendment to the Fish and Wildlife Coordination Act (FWCA). In Andrews opinion, this amendment:

...appears to have been a straightforward remedy for the procedure by which Congressman Dingell had managed to keep control of the bill throughout its development. 43

Aspinall's second amendment was aimed at limiting the Act to a simple policy statement with no teeth in it. He is quoted in the Congressional Record as saying in support of the amendment:

I do want the Record to show that what we propose in the language is to make clear that nothing in this Act changes the authority and responsibility of existing agencies created by other provision of law. In my opinion, if additional authority is needed and direction to existing agencies is needed, they should be provided by separate legislation. 44

The bill approved by the House contained his amendment for such purpose. It read as follows:

Sec. 9. Nothing in this Act shall increase, decrease, or change any responsibility or authority

⁴³Ibid., p. 93.

⁴⁴U.S., Congress, House, Congressional Record, 91st Cong., 1st sess., September 23, 1969, p. 8284.

of any Federal official or agency created by other provision of law."⁴⁵

The amendment which Senator Jackson had introduced to his bill in committee to declare a "national policy" was part of a new Title 1, much of which is retained in the final version. This title also incorporated a requirement for a "finding" by the responsible official regarding the environmental impact of an action. Such a requirement was later to be changed to a requirement for a "detailed statement," and is recognized as an essential element of the "action-forcing" provisions of NEPA.

Such provisions are attributed to "(w)itnesses supporting the proposed legislation" who "called for an 'action-forcing' mechanism that would guarantee that in the future the Government would follow through in its pledge to protect the environment."⁴⁶ As noted in Section 3.2.8 above, Professor Lynton K. Caldwell of Indiana University was influential in this regard. Testifying before the Senate Committee on Interior and Insular Affairs on S. 1075, Caldwell urged that:

...in the shaping of such (national environmental) policy, it have (sic) an action-forcing, operational aspect. When we think of policy we ought to think of a statement which is so written that it is capable of implementation; that it is not merely a statement of things hoped for; not merely a statement of desirable goals or objectives; but that it is a statement which will compel or reinforce or

⁴⁵Ibid.

⁴⁶CEQ, Third Annual Report, p. 222.

or assist all of these things, the Executive agencies in particular, but going beyond this, the Nation as a whole, to take the kind of action which will protect and reinforce what I have called the life support system of this country....(A) statement of policy by the Congress should at least consider measures to require the Federal agencies, in submitting proposals, to contain within the proposals an evaluation of the effect of these proposals upon the state of the environment.... 47

It is clear that the Aspinall amendment in the House to specifically limit the effect of the Act struck a severe blow to the "action-forcing" provisions of Senator Jackson's version. This conflict in expression of Congressional intent provides further insight into the politics of shepherding legislation through to enactment, but it also made it much more difficult to interpret the true intent of Congress later on when it came to the matter of implementing the law.

In response to the House referral of the bill back to the Senate, along with the normal request for a conference to resolve differences in the two bills, Senator Jackson proposed an amendment, based on a compromise with Muskie, and requested that the language of the Senate bill be insisted upon by the Senate conferees.⁴⁸ The Senate approved the amendment and instructions to insist on the new Senate language on October 8, 1969. The conference committee reported out a bill, which was in fact a compromise bill, on December 17, 1969.

⁴⁷U.S. Congress, National Environmental Policy, p. 116. Quoted from Andrews, "Environmental Policy," p. 87.

⁴⁸For a complete discussion of the "Muskie-Jackson Compromise" and the substance of the Jackson Amendment, see Andrews, "Environmental Policy," pp. 94-97.

The compromise bill was agreed to by the Senate on December 20, 1969. The House accepted the conference committee bill on December 23, 1969. The bill was signed into law by the President on January 1, 1970.

In their analysis of NEPA's legislative history, Yannacone and Cohen observe that:

...Sections 2, 101, 102, 103, 104, and 105, are based on S. 1075, as passed, there being no similar provisions in HR 12549, as passed. The remaining sections of the National Environmental Policy Act of 1969 are primarily based on HR 12549, as passed. 49

In effect then, it may be stated that NEPA is essentially a Senate bill in respect to its policy and "action-forcing" provisions and a House bill in respect to its other provisions, particularly the provisions dealing with the Council on Environmental Quality. The full text of NEPA is presented in Appendix J and its Section 102, primarily embodying its "action-forcing" provisions, appears above in section 1.4 of Chapter 1. The major provisions of NEPA are considered in the following section and a detailed examination of the EIS provisions of Section 102 appears in Chapter 6.

⁴⁹Victor J. Yannacone, Jr., and Bernard S. Cohen, Environmental Rights and Remedies (Rochester, N.Y.: The Lawyers Cooperative Publishing Co., 1972), p. 152.

5.3.2 Major Provisions of NEPA. All three of the major provisions of NEPA are examined here. The first aspect of the law to be considered is its policy thrust. Second, NEPA's Section 102 is commented on briefly, by way of introduction to a more detailed discussion in Chapter 6. Finally, the role of the CEQ, which was established by title II of the Act, is reviewed.

5.3.2.1 Declaration of Policy. Title I of the Act contains the Congressional declaration of national environmental policy. In Section 101 (a) it is declared that "it is the continuing policy of the Federal Government...to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans."⁵⁰ The Act provides further guidance to administrators in its elaboration of the goals to be achieved:

Sec. 101. (b) In order to carry out the policy set forth in this Act, it is the continuing responsibility of the Federal Government to use all practicable means, consistent with other essential considerations of national policy, to improve and coordinate Federal plans, functions, programs, and resources to the end that the Nation may--

(1) fulfill the responsibilities of each generation as trustees of the environment for succeeding generations;

(2) assure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings;

⁵⁰NEPA, Section 101 (a).

(3) attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;

(4) preserve important historic, cultural, and natural aspects of our national heritage, and maintain, wherever possible, an environment which supports diversity and variety of individual choice;

(5) achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities; and

(6) enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

(c) The Congress recognizes that each person should enjoy a healthful environment and that each person has a responsibility to contribute to the preservation and enhancement of the environment. ⁵¹

As was noted in the previous subsection, the policy and "action-forcing" provisions of the Act are based essentially on the Senate version of the bill. It is appropriate, therefore, to consider the Senate view of the policy intent of the Act. The Senate committee Report discussed the policy provisions of S. 1075 in terms of the purposes of the law. In the committee's view, the law was "designed to cope with environmental crisis..." and "to supplement existing, but narrow and fractionated, congressional declarations of environmental policy."⁵²

⁵¹Ibid., Section 101 (b) and (c).

⁵²U.S., Congress, Senate, Committee on Interior and Insular Affairs, National Environmental Policy Act of 1969: Report to Accompany S. 1075, 91st Cong., 1st sess., 1969, S. Rept. 91-296, p. 9.

The policy intent of S. 1075 was to rectify the fact that many agencies did "not have a mandate, a body of law, or a set of policies to guide their actions which have an impact on the environment."⁵³ In discussion of the relationship of S. 1075 to existing policies, the committee noted that despite a substantial record of Congressional legislation in specific areas of environmental concern during the previous decade:

...it is clear that there is very real reason for concern for those areas in which no policies have been established or in which the conflicting operational policies of different agencies are frustrating and complicating the achievement of environmental quality objectives...

S. 1075, as reported by the committee, would provide all agencies and all Federal officials with a legislative mandate and a responsibility to consider the consequences of their actions on the environment. This would be true of the licensing functions of independent agencies as well as the ongoing activities of the regular Federal agencies.

In addition, by providing a statement of national environmental goals, policies, and procedures, S. 1075 would give renewed and vigorous emphasis to the importance of existing environmental programs and legislation. 54

It is clear from the language of the committee's report and the actual language of NEPA that the policy intent was to levy a direct requirement on agencies and their officials to assume responsibility for environmental protection.

Commenting on the substantive impact of NEPA, the CEQ has observed that the far-reaching result of the new policy

⁵³Ibid.

⁵⁴Ibid., p. 14.

is that:

...agencies whose statutory mandates previously did not call for attention to the environmental effects of their actions are now required to take those effects into account. And agencies whose mandates previously directed their attention only to certain facets of the environment now have a responsibility as broad as the environmental policy declared in NEPA. 55

Achievement of this result was a matter of serious concern to the proponents of a national policy. Their concern was reflected in the "action-forcing" measures of the Act, which is briefly considered in the following subsection and in considerable detail in Chapter 6.

5.3.2.2 Action-forcing Requirements. As was noted above, the Senate version of the bill incorporated a requirement for a "finding" concerning environmental impact of agency actions.⁵⁶ This requirement was subsequently changed in the conference committee to NEPA's Section 102(C) requirement for a "detailed statement." The requirement that agencies make such a statement is the provision of NEPA which has been the subject of most public discussion of the Act, and has been the cause of whatever success has been realized in achieving the purposes and goals of the Act. An elaborate system of policy directives has been generated within agencies to insure compliance with the provisions of Section 102, and the CEQ has published guidelines for agencies to follow in connection with the 102 provisions. Most of the litigation

⁵⁵CEQ, Third Annual Report, p. 225.

⁵⁶See subsection 5.3.1.2, pp. 66-67.

under NEPA has been filed in connection with enforcement of the EIS provisions of this section of the Act. The role of the courts in implementing NEPA is examined in section 5.4 below.

5.3.2.3 The Council on Environmental Quality.

The third major provision of the Act is concerned with the establishment of the Council on Environmental Quality, which is provided for in title II of the Act. The Council is legislatively created in the Executive Office of the President, and is composed of three members who are appointed by the President to serve at his pleasure. The Council appointments are made "by and with the advice and consent of the Senate" and one member is designated by the President to serve as Chairman.

The Congress provided the President with a "job description" for Council members in Section 202, which created the CEQ, by setting forth the "qualifications" expected in the appointees.

...Each member shall be a person who, as a result of his training, experience, and attainments, is exceptionally well qualified to analyze and interpret environmental trends and information of all kinds; to appraise programs and activities of the Federal Government in the light of the policy set forth in title I of this Act; to be conscious of and responsive to the scientific, economic, social, esthetic, and cultural needs and interests of the Nation; and to formulate and recommend national policies to promote the improvement of the quality of the environment. 57

⁵⁷NEPA, Section 202. See footnote 58 for biographical data on the first three Council members.

The President nominated the first three Council members on January 29, 1970, less than a month after signing NEPA into law on January 1.⁵⁸ The nominees were: Chairman, Mr. Russell E. Train; members, Mr. Robert Cahn and Dr. Gordon J. F. MacDonald. The President nominated Mr. Train on July 26, 1973, to be the Administrator of the United States Environmental Protection Agency and he was confirmed by the Senate for the post on September 10, 1973, by a vote of 85 to 0.

⁵⁸ Some readers may wish to compare the following biographical data of the original Council members with the qualifications set forth in Section 202 of the Act:

"Mr. Train was formerly Under Secretary of the Interior. From 1965 to 1969 he was president of the Conservation Foundation and has been active in a number of other conservation organizations, both here and abroad. He served on the staffs of congressional committees and headed the Treasury Department's tax legislative staff before being appointed to the Tax Court of the United States, on which he served for eight years. Following the 1968 election, President-elect Nixon appointed him chairman of a special task force on environmental problems.

Mr. Cahn is on leave from the Washington Bureau of The Christian Science Monitor, for which he has been a correspondent since 1965. He was awarded the 1969 Pulitzer Prize for National Reporting for his series of articles on National Parks. He has been a reporter for the Seattle Star, the Pasadena Star-News, and Life magazine; an editor of Collier's and the Saturday Evening Post; and the White House correspondent for the U.S. Information Agency.

Dr. MacDonald is from the University of California at Santa Barbara, where he was vice chancellor for research and graduate affairs since September 1968. He was a member of the President's Science Advisory Committee, 1965-69. For the National Academy of Sciences, he served on the Committee on Atmospheric Sciences, 1961-70; The Space Science Board, 1962-70; and the Environmental Studies Board, 1968-70, part of which period he was the Board Chairman. He has also been chairman of the Executive Committee of the Earth Sciences Division, National Research Council." Council on Environmental Quality, Environmental Quality--The Second Annual Report of the Council on Environmental Quality (Washington, D.C.: Government Printing Office, August 1971), pp. 358-359. See also footnote 57.

The provision in NEPA for a council of advisers to the President on matters of vital importance was not without legislative precedent. Both in its approach to establishing a national policy and creation of a three member Council, NEPA is widely acknowledged to have been patterned after the Employment Act of 1946.⁵⁹

...That Act, which grew out of the concern about economic dislocations after World War II, declared a responsibility in the Federal Government to maintain a prosperous and stable national economy. The Act also created the three-man Council of Economic Advisers to advise the President in carrying out that responsibility and in preparing an annual report on the economy. The Employment Act was a watershed in the Federal Government's relationship to national economic problems. By following both aspects of that Act -- declaring a Federal responsibility for action and providing for a council and an annual report -- the sponsors of the 1969 bills hoped to create a similar watershed in the Government's relationship to environmental problems.⁶⁰

Although both the Senate and House bills contained provision for the creation of a Council on Environmental Quality, there were minor differences in their proposals for the composition of the Council itself. For example, both proposed a three member Council, but S. 1075 provided for the President to appoint both a chairman and a vice chairman. The original version of H.R. 6750 was amended in H.R. 12549 to increase the CEQ membership from three to five members, with one member to be appointed as chairman, and neither of the House bills had provisions for a vice chairman. Senator Jackson's Amendment

⁵⁹Public Law 304, Ch. 33, 60 Stat. 23 (Feb. 20, 1946) as amended, 15 U.S.C. Sections 1021-1024.

⁶⁰CEQ, Third Annual Report, p. 222.

Number 25 of May 29, 1969, provided for the CEQ to be called the "Board of Environmental Quality Advisers," in order "to avoid confusion with the interagency cabinet-level Council on Environmental Quality."⁶¹ The current Council composition was established, of course, in the conference committee version of the final bill. The placement of the CEQ within the governmental structure of the United States is shown in Figure 5-2 under the Executive Office of the President. Simply showing the "organizational chart" location of the Council does not, however, give an understanding of the role assigned to the CEQ in developing national environmental policy. The specific duties of the CEQ are outlined in NEPA and elsewhere and these are examined in the following subsection.

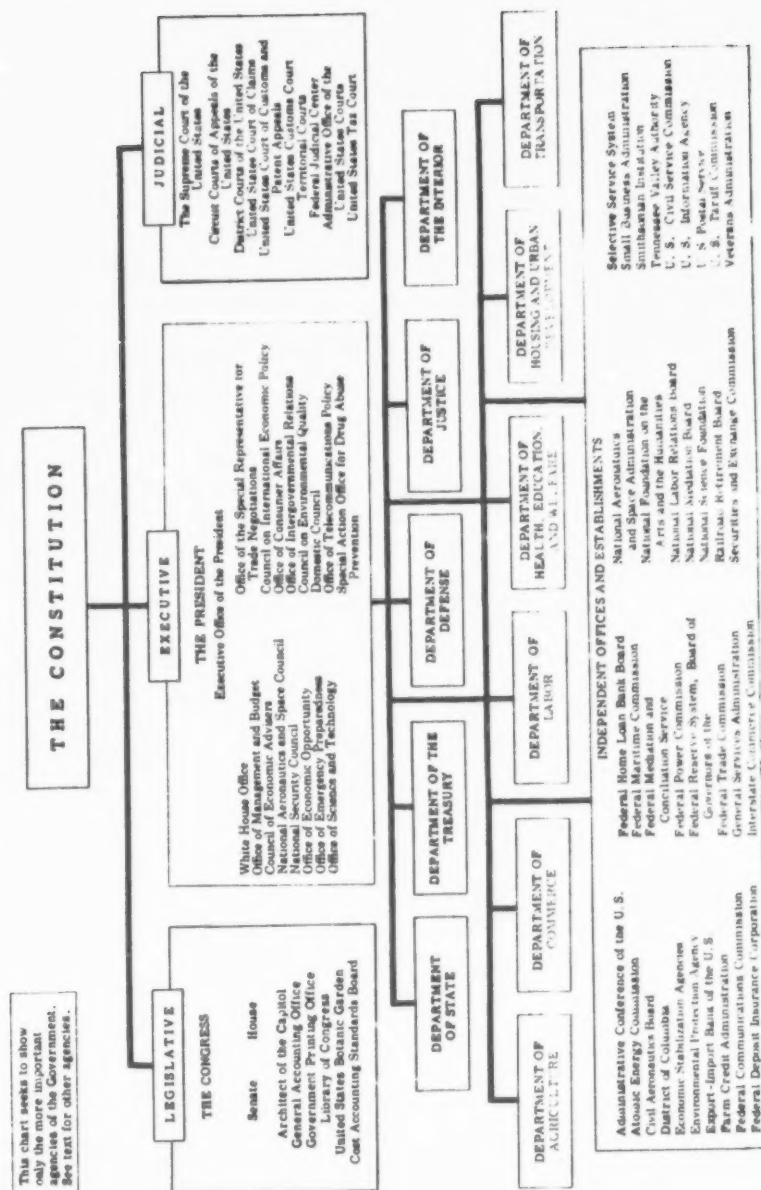
5.3.3 Functions and Role of the CEQ. Defining the role of the CEQ in achieving the objectives of NEPA is a central concern of title II of the Act. The CEQ responsibilities are elaborated upon by the President in the Executive order directing implementation of NEPA,⁶² in the Environmental Quality

⁶¹U.S. Congress, Senate, National Environmental Policy Act of 1969, p. 7. See also the discussion in this same source on pp. 15-16 concerning the relationship of NEPA to this cabinet-level Council. President Nixon established an interagency Environmental Quality Council on June 3, 1969, by Executive Order 11472. The Council was to be composed of six Cabinet officers and to be chaired by the President. This Council was abolished under the President's reorganization Plan No. 2 of 1970, which created a Domestic Council in the Executive Office of the President. See footnote 62 for source of amendments to E.O. 11472 resulting from enactment of NEPA.

⁶²Executive Order 11514, March 5, 1970, F.R. Doc. 70-2861. Reprinted in 35 Federal Register, March 7, 1970, pp. 4247-48. Attached here as Appendix K.

Figure 5-2

THE GOVERNMENT OF THE UNITED STATES



Source: Office of the Federal Register, United States Government Organization Manual-1972/73 (Washington, D.C.: Government Printing Office, July 1972), p. 25.

Improvement Act of 1970,⁶³ and in Congressional hearings on the administration of the Act.⁶⁴ It is the objective of this subsection to clarify the functions and role of the CEQ.

5.3.3.1 CEQ Duties Assigned by NEPA. The duties and functions of the CEQ are set forth in NEPA as follows:

Sec. 204. It shall be the duty and function of the Council--

(1) to assist and advise the President in the preparation of the Environmental Quality Report required by section 201;

(2) to gather timely and authoritative information concerning the conditions and trends in the quality of the environment both current and prospective, to analyze and interpret such information for the purpose of determining whether such conditions and trends are interfering, or are likely to interfere, with the achievement of the policy set forth in title I of this Act, and to compile and submit to the President studies relating to such conditions and trends;

(3) to review and appraise the various programs and activities of the Federal Government in the light of the policy set forth in title I of this Act for the purpose of determining the extent to which such programs and activities are contributing to the achievement of such policy, and to make recommendations to the President with respect thereto;

(4) to develop and recommend to the President national policies to foster and promote the improvement of environmental quality to meet the conservation, social, economic, health, and other requirements and goals of the Nation;

⁶³Public Law 91-224, April 3, 1970; 83 Stat. 114; 42 U.S.C. 4371-4374.

⁶⁴U.S., Congress, House, Committee on Merchant Marine and Fisheries, Administration of the National Environmental Policy Act - Part I. Report of Hearings held December 7, 8, 9, 10, 11, 16, 18, 21, and 22 December 1970.

(5) to conduct investigations, studies, surveys, research, and analyses relating to ecological systems and environmental quality;

(6) to document and define changes in the natural environment, including the plant and animal systems, and to accumulate necessary data and other information for a continuing analysis of these changes or trends and an interpretation of their underlying causes;

(7) to report at least once each year to the President on the state and condition of the environment; and

(8) to make and furnish such studies, reports thereon, and recommendations with respect to matters of policy and legislation as the President may request. 65

As Senator Jackson envisioned the functioning of the Council, it would:

...provide an institution and an organizational focus at the highest level for the concerns of environmental management...(P)rovide the President with objective advice and a continuing and comprehensive overview of the fragmented and bewildering Federal jurisdiction involved in some way with the environment. 66

The above list of duties clearly assigns a central review and analysis role to the CEQ, but it does not give the Council any enforcement or regulatory authority over the other Federal agencies to insure their compliance with the policy provisions of NEPA. The Council's involvement with other agencies is officially an indirect affair via the Office of the President.

⁶⁵NEPA, Section 204.

⁶⁶U.S., Congress, Senate, Congressional Record, 91st Cong., 1st sess., December 20, 1969, p. 40416.

Although there is no "chain of command" authority vested in the CEQ over other agencies by NEPA, the Council does exercise considerable influence over their activities as a result of the President's clear assignment of a coordinating role in his directive to agencies concerning implementation of NEPA. The nature of the role assigned by the President is considered in the following subsection.

5.3.3.2 CEQ Duties Assigned by the President. As a matter of policy, the President directed that the CEQ would advise and assist the President in leading the national effort to achieve the objectives of NEPA.⁶⁷ He strengthened the ability of the CEQ to assume this role by directing other agencies to review their policies and procedures for compliance with NEPA and to submit a report of the review and any corrective action, taken or planned, to the CEQ five months later.⁶⁸ He further strengthened the influence of the Council by enumerating its responsibilities, including several which were not explicit in NEPA. Prominent in the latter category, was the assignment to "coordinate Federal programs related to environmental quality,"⁶⁹ and to:

(h) Issue guidelines to Federal agencies for the preparation of detailed statements on proposals

⁶⁷Executive Order 11514, Section 1.

⁶⁸Ibid., Section 2(d).

⁶⁹Ibid., Section 3(f).

for legislation and other Federal actions affecting the environment, as required by section 102(2)(C) of the Act.

(i) Issue such other instructions to agencies, and request such reports and other information from them, as may be required to carry out the Council's responsibilities under the Act. ⁷⁰

The CEQ functions primarily in its capacity as an adviser to the President, not as an all-powerful "ombudsman" for the environment. It is charged by the President to "seek resolution of significant environmental issues,"⁷¹ and to "conduct, as it determines to be appropriate, public hearings or conferences on issues of environmental significance."⁷² The authority to conduct such conferences on issues of environmental significance has been relied upon to resolve differences with agencies in connection with the EIS process.

Copies of agency EIS's and the comments and views of reviewing agencies are required to be submitted to the CEQ under Section 102(2)(C) of NEPA. If a difference of opinion should arise on an issue of "environmental significance" between the CEQ and an agency submitting an EIS, the matter would be handled through an informal conference rather than be resolved on the basis of a solution imposed by the CEQ under some alleged statutory authority.

⁷⁰Ibid., Sections 3(h) and (i).

⁷¹Ibid., Section 3(a).

⁷²Ibid., Section 3(d).

The issue of CEQ authority has been examined by Reitze from the standpoint of Congressional intent and judicial interpretation of that intent.⁷³ The absence of statutory authority for the CEQ to direct the activities of other agencies is clear from the conference committee report on the duties of the CEQ under NEPA.

It is not the committee's intent that the Council be involved in the day-to-day decision-making processes of the Federal Government or that it be involved in the resolution of particular conflicts between agencies and departments.⁷⁴

Additional reinforcement of this view is provided by judicial review of the duties of the Council. One court, for example, held the following opinion on the role of the CEQ:

Thus, the Council's function is in no way regulatory. Its purpose is to take information and to coordinate the reporting of governmental activities so as to aid the policy makers.⁷⁵

It is clear, therefore, that the Council's effectiveness in coordinating the activities of other agencies with regard to environmental issues is largely dependent on the strong support given to it by the President. The Council may interpret its authority to "issue...instructions to agencies, and request...reports and...information from them..."⁷⁶ as being

⁷³Arnold W. Reitze, Jr., *Environmental Law*, 2d ed. (Washington, D.C.: North American International, 1972), pp. One-48-49.

⁷⁴U.S. Congress, Senate, Congressional Record, 91st Cong., 1st sess., December 20, 1969, p. 40421.

⁷⁵See *National Helium Corp. v. Morton*, F.2d, 3ERC 1129, 1133 (10th Cir. 1971).

⁷⁶Cf. footnote 70.

sufficient to require an agency to resubmit a more adequate EIS, but as Reitze indicates:

...Aside from rejecting a statement and requiring an agency to resubmit a more adequate one, the Council has no other sanction which they can impose to require an agency to respond or comply. ⁷⁷

The ability of the CEQ to carry out the responsibilities assigned to it under NEPA and by the President was enhanced by the enactment of a companion bill to NEPA, the provisions of which are considered in the following subsection.

5.3.3.3 The Environmental Quality Improvement Act of 1970. Although the CEQ was created by NEPA to be an agency of the Executive Office of the President, it was left for a companion bill to provide for an administrative organization to support the functioning of the Council.⁷⁸ The Environmental Quality Improvement Act of 1970, which was passed as title II of the Water Quality Improvement Act of 1970 (Public Law 91-224), created a new Office of Environmental Quality to "provide the professional and administrative staff for the Council on Environmental Quality established by Public Law 91-190 (NEPA)."⁷⁹ Under the provisions of this Act, the Chairman of the CEQ is designated as the Director of the Office of Environmental Quality and "the activities of the

⁷⁷Reitze, Environmental Law, p. One-49.

⁷⁸Public Law 91-224, title II. For a discussion of the Muskie-Jackson compromise on NEPA and this Act see Andrews, "Environmental Quality," pp. 94-97.

⁷⁹Ibid., Section 202(c)(2).

Council and Office are meshed into one entity."⁸⁰

The Director is charged, among other things, with reviewing the adequacy of systems for monitoring environmental changes, encouraging development of means to prevent or reduce adverse effects of technology and Federal Government actions that endanger the health and well-being of man, and assisting agencies in the development of environmental standards.

The overall impact of this Act is to reinforce the coordinating role of the CEQ in Federal Government environmental affairs and to provide the necessary professional and administrative resources to enable the CEQ to accomplish its assigned mission.

5.3.3.4 Summary of the CEQ Role. It is appropriate to conclude this analysis of the duties and functions of the CEQ with a brief summary of the preceding discussion. It has been shown that the CEQ has been granted broad environmental coordination responsibility under two different statutes and a major Executive order.

Under NEPA, the Council has been assigned the role of assisting the President with the preparation of an annual environmental quality report, making recommendations to him on national environmental policies, analyzing environmental quality conditions and trends, and appraising the effect of Federal activities and programs on the quality of the environment.

⁸⁰Council on Environmental Quality, Environmental Quality--The First Annual Report of the Council on Environmental Quality (Washington, D.C.: Government Printing Office, August 1970), p. 21.

The President's implementing directive strengthened the Council's position as an adviser to the President by making it clear that he looked to the CEQ to coordinate environmental issues.

The Environmental Quality Improvement Act of 1970 reinforced the coordinating role of the CEQ and provided it with the manpower resources required to carry out its responsibilities.

The overall functions and responsibilities of the CEQ, especially its relationship to the Environmental Protection Agency, the Office of Management and Budget, and the Council of Economic Advisers, was the subject of testimony by various officials during Congressional hearings at the end of NEPA's first year of existence.⁸¹ The testimony indicates substantial acceptance of the CEQ's coordinating role by other agencies. At one point during the hearings, for example, Mr. Train was asked if he was receiving full cooperation from other branches of the Government. His reply was affirmative:

Yes, I think very much so. We have strong support from the Office of Management and Budget, for example, which is exceedingly significant. We have strong support from the White House. The President is interested in seeing that this program is properly implemented.

As you will discover as your hearings proceed, agency cooperation has been good, but actual performance varies among different agencies...On the cooperation side, I think it has been excellent. ⁸²

⁸¹See footnote 64.

⁸²U.S., Congress, House, Administration of NEPA, p. 11.

The duties and functions of the Council are rather explicitly defined in the two acts discussed here and the NEPA implementing Executive order.

...Taken together, the legislation and the Executive order provide a broad charter for the Council. They also provide a mandate for reform in the way Federal agencies make environmental decisions--from initial planning to implementation. 82 (emphasis added)

It is clear that the Council on Environmental Quality has an important role to play in achieving the overall objectives of NEPA. Another organization which plays an important part in this country's efforts to enhance the quality of the environment is the United States Environmental Protection Agency, which is examined briefly in the following section concerned with implementing the national environmental policy.

5.4 Implementing the National Policy. The previous section was concerned with analysis of the development of national policy. In this section, the analysis is focused on implementation of the policy. The organization and functions of the EPA are considered briefly and the role of the courts in implementing NEPA is examined.

5.4.1 Organization and Functions of the United States Environmental Protection Agency. As indicated in section 1.7 above, the creation of the EPA came about through governmental

⁸²CEQ, First Annual Report, p. 21.

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reorganization. The reorganization plan which the President developed to provide for the creation of EPA was based on recommendations submitted to him by the President's Advisory Council on Executive Organization. President Nixon asked the Council, headed up by Roy L. Ash, in 1969, "to make an especially thorough study of the organization of Federal environmental natural resource and oceanographic programs."⁸³ The Council's recommendations were incorporated into the President's Reorganization Plan No. 3 of 1970. The Plan was submitted to Congress on July 9, 1970, and was given hearings by both Houses of the Congress in subsequent months. There being no adverse Congressional action, the plan became effective on December 2, 1970, which marks the official birthdate of EPA.

5.4.1.1 Consolidation of Environmental Authority.

The creation of EPA involved consolidating into one agency the responsibility for administering the then existing Federal programs dealing with water pollution, air pollution, pesticides regulation, solid waste disposal, and environmental radiation. This entailed "pulling together into one agency a variety of research, monitoring, standard-setting and enforcement activities"⁸⁴ which were scattered throughout a number of different departments and agencies.

⁸³The President's Message on the Environment, February 10, 1970. Quoted from a reprint appearing in CEQ, First Annual Report, p. 270.

⁸⁴Message of the President Relative to Reorganization Plans Nos. 3 and 4 of 1970, July 9, 1970. Quoted from a reprint appearing in CEQ, First Annual Report, p. 294.

The President noted that under the terms of Reorganization Plan No. 3, the following functions would be consolidated under the new Environmental Protection Agency:

- The functions carried out by the Federal Water Quality Administration (from the Department of the Interior).
- Functions with respect to pesticides studies now vested in the Department of the Interior.
- The functions carried out by the National Air Pollution Control Administration (from the Department of Health, Education, and Welfare).
- The functions carried out by the Bureau of Solid Waste Management and the Bureau of Water Hygiene, and portions of the functions carried out by the Bureau of Radiological Health of the Environmental Control Administration (from the Department of Health, Education and Welfare).
- Certain functions with respect to pesticides carried out by the Food and Drug Administration (from the Department of Health, Education and Welfare).
- Authority to perform studies relating to ecological systems now vested in the Council on Environmental Quality.
- Certain functions respecting radiation criteria and standards now vested in the Atomic Energy Commission and the Federal Radiation Council.
- Functions respecting pesticides registration and related activities now carried out by the Agricultural Research Service (from the Department of Agriculture).⁸⁵

⁸⁵ Ibid., p. 296. The President's message cited here includes a brief description of the principal functions to be transferred. A short but excellent review of the evolution of Federal Government pollution control legislation is presented in the Environmental Protection Agency's publication titled Environmental Protection Agency: A Progress Report, December 1970-June 1972. (Washington, D.C.: Government Printing Office, November 1972), pp. vii-xi.

The new agency was also expected to develop competence in areas of environmental protection that had not previously been given enough attention, such as noise problems, for example.

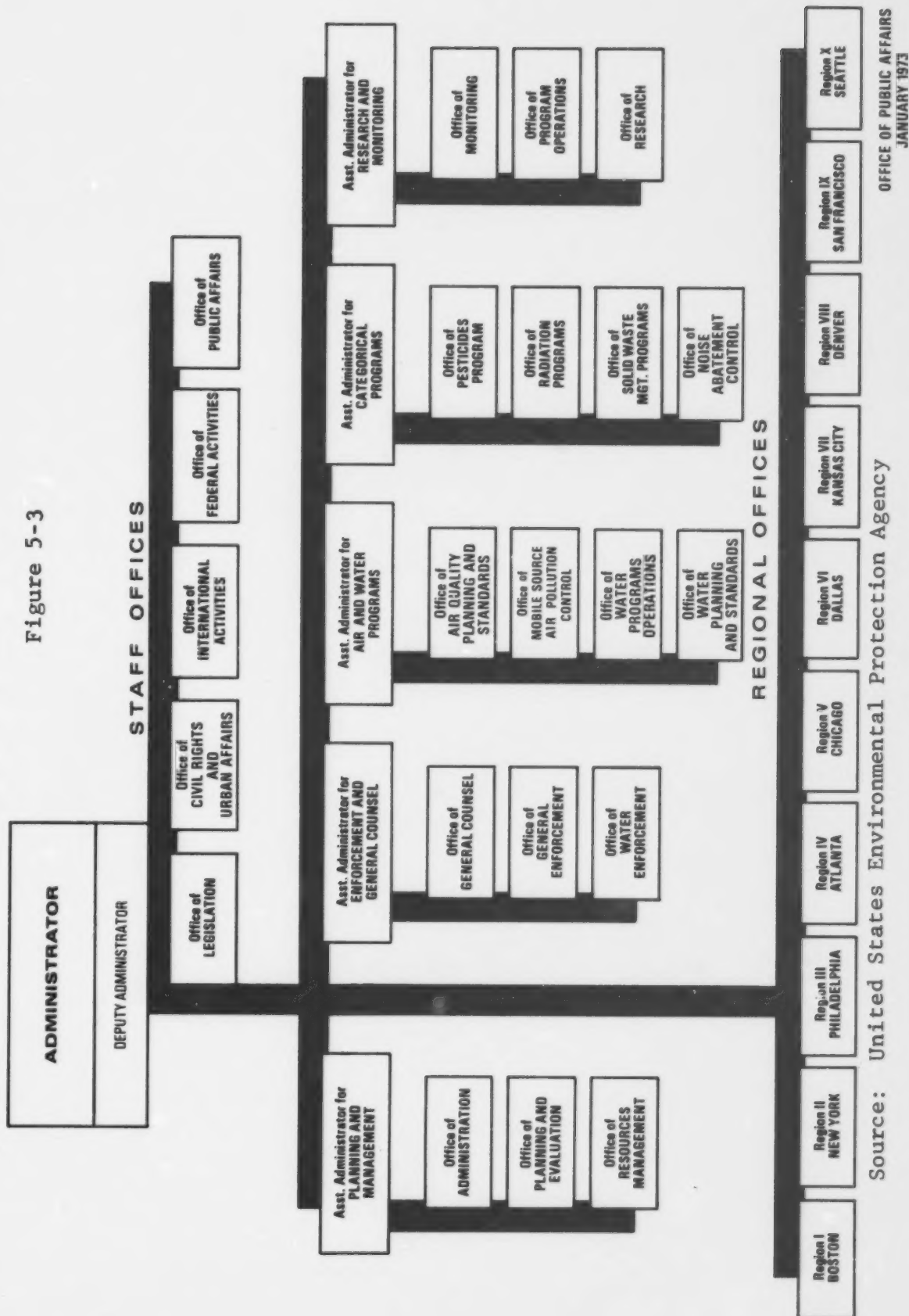
5.4.1.2 Internal Organization of EPA. The Agency appears in Figure 5-2, Organization Chart of the Government of the United States, along with the other Independent Offices and Establishments. As noted in Section 1-7, it is an independent regulatory agency which reports directly to the President. Figure 5-3 shows the internal organization of the agency. Given the nature of the functions which were consolidated within the agency, it is not surprising that the agency was structured along functional lines. Three of the five Assistant Administrators exercise line authority for the major functional areas of Planning, Enforcement, and Research and Monitoring, while the other two supervise the Air and Water Programs and other "Categorical" Programs such as pesticides, radiation, solid waste management, and noise abatement control. More or less comparable functional structures are to be found in each of the ten regional offices.

The agency was authorized a total of 7,192 positions during 1971 and the fiscal year 1972 budget request included provision for an additional 1,655 positions.⁸⁶ As an estimate, one may consider that about half of the total authorized positions

⁸⁶CEQ, Second Annual Report, p. 6.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Figure 5-3



are allocated at the national headquarters level, and the other half are distributed about equally among the ten regional offices.⁸⁷ In an analysis of the Fiscal Year 1973 Federal Budget, Reitze noted that:

...there are funds for about 8,500 permanent employees and the equivalent of 811 other full-time jobs after adding up the hours of part-timers or temporary workers. All but 300 of these positions come under the Government Service (GS) pay categories, and the average pay for these jobs was \$13,562. There were seven positions higher than the GS levels, these paying \$38,000 to \$42,500....

...EPA's expenditures, excluding the sewage treatment grants program, could be divided as follows: air, 43.8 percent; water, 41.5 percent; solid wastes, 5.9 percent; pesticides, 5.9 percent; radiation, 2.6 percent, and noise, 0.3 percent....The above figures are based on the entire EPA operations budget, not merely in the pollution control and abatement category.⁸⁸

5.4.1.3 Relationship Between EPA and CEQ. Clearly there could be some confusion concerning the functions of EPA outlined here and those of the CEQ which were discussed in section 5.3.3 above. Indeed, as seen in section 5.4.1.1 above, the President transferred authority from the CEQ to EPA "to perform studies relating to ecological systems...."⁸⁹ The President intended that:

This authority to perform studies and research relating to ecological systems would be in addition to EPA's other specific research authorities, and it would help EPA to measure the impact of pollutants. The Council on Environmental Quality would retain

⁸⁷Personal interview, Jack Ravan, Regional Administrator, Region IV, Environmental Protection Agency, Atlanta, Georgia, February 23, 1972.

⁸⁸Reitze, Environmental Law, p. Introduction-73.

⁸⁹See footnote 85.

its authority to conduct studies and research relating to environmental quality.⁹⁰

The President acknowledged the possible confusion of organizational roles and went on to clarify his view of the relationship between the two agencies:

It is my intention and expectation that the two will work in close harmony, reinforcing each other's mission. Essentially, the Council is a top-level advisory group (which might be compared with the Council of Economic Advisers), while the EPA would be an operating, "line" organization. The Council will continue to be a part of the Executive Office of the President and will perform its overall coordinating and advisory roles with respect to all Federal programs related to environmental quality.

The Council, then, is concerned with all aspects of environmental quality--wildlife preservation, parklands, land use, and population growth, as well as pollution. The EPA would be charged with protecting the environment by abating pollution. In short, the Council focuses on what our broad policies in the environmental field should be; the EPA would focus on setting and enforcing pollution control standards. The two are not competing, but complementary--and taken together, they should give us, for the first time, the means to mount an effectively coordinated campaign against environmental degradation in all of its many forms.⁹¹

The relationship between the two agencies was a matter of interest to the House Subcommittee on Fisheries and Wildlife, which conducted a series of hearings in December, 1970, on the administration of NEPA. The first administrator of EPA, Mr. William D. Ruckelshaus, was invited to appear to discuss the administration of EPA in light of NEPA. He addressed his first remarks to the relationship, as he saw it, between EPA

⁹⁰ Message of the President Relative to Reorganization Plans Nos. 3 and 4. Quoted from reprint in CEQ, First Annual Report, p. 297.

⁹¹ Ibid., p. 300.

and the CEQ. According to Mr. Ruckelshaus:

The Environmental Protection Agency's primary mission is precisely the same as that of the Council on Environmental Quality--protection and enhancement of the environment. For that reason, we will have a particularly close and mutually supportive relationship with the Council. While the missions are the same, however, the basic roles and scope of concern differ.

EPA's role is to implement regulatory, research, and assistance programs in the environmental quality functions assigned to it; namely air and water pollution control, solid waste management, protection from radiological hazards, and pesticide regulation.

The Council, on the other hand, acts as a staff arm of the President in national environmental policy formulation and overview of Federal agency actions as they affect the environment. These relate not only to the environmental areas where EPA has a primary operating function but also to the broader front of issues including preservation of park lands and recreational areas, national land use policy, management of the Nation's resources, and population control.⁹²

Mr. Ruckelshaus' view of the relationship between his agency and the CEQ was in substantial agreement with the view held by the CEQ's first Chairman, Mr. Russell Train. Mr. Train was the leadoff witness in the Subcommittee's hearings. When asked by Congressman Rogers if he saw any duplication between the Council and EPA, Mr. Train replied: "None whatsoever. Should any duplication arise, obviously we will work to eliminate it."⁹³ Noting that there may have been some

⁹²U.S., Congress, House, Administration of NEPA, pp. 471-72. Statement of Hon. William D. Ruckelshaus, Administrator, Environmental Protection Agency, December 9, 1970.

⁹³Ibid., p. 11. Statement of Russell E. Train, Chairman, Council on Environmental Quality, December 7, 1970.

uncertainty in the public's mind as to the roles of the two agencies, Mr. Train expanded on the point as follows:

Our Council is charged primarily with policy development for the President. We are the primary instrument for policy development in the environmental field for the President.

We also have responsibility for the section 102 process, which I think you might say is a programmatic responsibility. With that one exception, we are advisory in nature, rather than being a line administrative agency.

While the functions and responsibilities of EPA are in certain specific areas set out by statute--namely, water pollution, air pollution, solid waste management, pesticide registration and control, and radiation standards setting--the responsibilities of the Council extend over the entire range of Federal activity as it may pertain or relate to environment. This, of course, extends to highway programs, airport programs, Corps of Engineers water resource programs, Bureau of Reclamation programs, nuclear powerplant licensing, agricultural programs, and military programs, as has been mentioned this morning in connection with nerve gas transportation. These, by and large, are not matters in which EPA would have primary responsibility.

EPA, as a pollution-responsible agency, would be one of the agencies expected to comment on other Federal programs which would have an impact in its particular fields of competence, expertise, and jurisdiction.

I think these are the essential differences.⁹⁴

It has been shown here that there is essential agreement between the top management of both the CEQ and EPA on their respective roles as envisioned by the President in his Reorganization Plan No. 3. The relationship is clearly understood at the lower operating levels of EPA as well. Commenting on the 102 process "programmatic responsibility" of the CEQ,

⁹⁴Ibid., pp. 11-12.

the Chief of EPA's Region IV Environmental Impact Statements Branch, Mr. Sheppard N. Moore, noted that the CEQ:

...is a small group. There are about 60 staff members, of which only 15 to 20 are primarily involved in the impact statement process....They are engaged in three basic activities:

First...; they write guidelines which are the primary rules of the road. Second, they review agency NEPA procedures, frequently suggest changes to them, and generally monitor how adequately each agency is implementing NEPA. Third, CEQ trouble-shoots problem projects. In the case of such a project, they generally attempt to mediate the dispute, although on occasion they even act as an advocate in the dispute. CEQ does not, however, approve projects. It has no authority to approve or disapprove projects, nor does it have the staff resources even to read more than a fraction of the impact statements it receives. All impact statements must be filed with CEQ, but CEQ is very selective in determining those in which it will intervene. In short, it might be said that as long as the statement is made available to CEQ, it will be able to fulfill its role of internal advisor to the Executive Branch and to the President as contemplated by NEPA.⁹⁵

While the authority of the CEQ and the EPA represents a potent instrument for achieving the policy goals of NEPA, another force of great consequence is the support given NEPA in the courts. The following section examines the role of the courts in enforcing NEPA.

⁹⁵Sheppard N. Moore, "The Environmental Impact Statement Process," speech presented at Georgia State University, Atlanta, Georgia, July 23, 1973.

5.4.2 The Role of the Courts. The implementation of national environmental policy has rested heavily on citizen suits brought under NEPA. It is clearly impossible to cover here in depth the whole range of legal issues opened up by NEPA, but this section will provide an understanding of the nature of the issues involved by focusing on several of the key cases which have been brought in the environmental arena.

5.4.2.1 The Need for Interpretation. There have been a great number of lawsuits filed under NEPA since the Act was signed into law on January 1, 1970. As noted in section 1.8 above, more than 200 had been filed in connection with 2,933 EIS's which had been submitted to the CEQ through May 1972. According to one CEQ staff member, the figure had grown to 363 cases in connection with 3,832 EIS's filed by February 1, 1973.⁹⁶ The lawsuit to project ratio has been holding at slightly less than ten percent, but one would expect the ratio to decline in the future as agencies become more aware of the requirements imposed upon them by the law.

The reason for such a high frequency of court action may be explained partially by the breadth of impact of NEPA itself. As discussed in section 5.3, the Act affects virtually every Federal agency, so it is not surprising that there have been a wide range of suits involving the whole spectrum of government services.

⁹⁶ Steve Sloan, CEQ staff member, personal interview, Washington, D.C., April 6, 1973.

A further explanation lies in the vagueness of the Congressional intent expressed in the statute. This was an issue examined in some detail by Andrews, whose analysis of the legislative development of NEPA led him to conclude that there "was a significant increase in the number of administrative decisions accepted for judicial review, a consequence which may not have been (sic) foreseen by many Congressmen."⁹⁷

The issue of uncertainty about the intent of Congress is well illustrated in the remarks of the Director of EPA's Regional Liaison Staff, Mr. Neil Orloff, at an EIS seminar:

...The courts have shaped the impact statement process in a manner almost unparalleled in the history of the development of Federal programs. Although this role of major architect may be due in part to the current public consciousness of the environment as an important issue, the activism of the courts is probably more directly a result of the great ambiguity in the words of the statute. NEPA has been called, by leading judges and legal scholars, one of the most opaque statutes ever written. The types of questions that are being directed to the courts are ordinarily addressed at the time a bill is drafted and enacted by Congress. This was not, however, the case with the National Environmental Policy Act. One simply cannot find in the statute or its legislative history the answers to a number of major questions surrounding the impact statement process. As a result, the courts have been called on, in the name of "interpretation," to develop answers to major policy questions.⁹⁸

⁹⁷ Andrews, "Environmental Policy," p. 102.

⁹⁸ Neil Orloff, "The Environmental Impact Statement Process," (Paper presented at the Environmental Impact Statement Seminar of the Twin Cities Federal Executive Board, Minneapolis, Minnesota, February 6, 1973), p. 8.

Given the important role of the courts in protecting the environment, it is appropriate to turn now to a discussion of several key cases involved in environmental issues. The discussion is based on suits arising directly under the terms of NEPA as well as suits over environmental issues which were brought under other acts.

5.4.2.2 Citizen Standing to Sue. The CEQ has addressed the issue of the citizen's right to go to court over Federal agency actions that affect the environment in its second and third annual reports.⁹⁹ The major decision in this regard was the Supreme Court decision in April 1972 in Sierra Club v. Morton (the Mineral King case).¹⁰⁰ This was a case brought by the Sierra Club, under laws other than NEPA, which opposed development of a ski resort on Federal land in California's Mineral King Valley. Although the Court found that the Sierra Club had not asserted a sufficient basis of direct injury to have standing in this case, it did make clear that citizens and groups who can demonstrate a direct interest in preventing environmental injury can sue to protect their interests on environmental grounds rather than having to show direct economic injury. The Court noted the steps which must be followed in bringing such suits in the future and advised the Sierra Club that it could amend its suit in lower Federal courts in attempting to show a more direct interest.

⁹⁹CEQ, Second Annual Report, Chapter 5, "The Law and the Environment," pp. 155-187. Third Annual Report, "The Courts and NEPA," pp. 248-255.

¹⁰⁰Sierra Club v. Morton, 40 U.S.L.W. 4397, 3 ERC 2039, 2 ELR 20192 (1972).

The Court's Mineral King decision:

...has banished any doubt that the environmental interests embodied in Federal statutes, such as NEPA, stand on a par with economic and other interests before the Federal courts. When Government action in violation of NEPA threatens environmental interests, injured citizens are entitled to seek judicial redress.¹⁰¹

The citizen's "standing" to sue is supported by the CEQ, as evidenced by the comments of the Council's General Counsel, Mr. Timothy B. Atkeson, before the Environmental Law Conference, which was sponsored by the American Law Institute and the American Bar Association in Washington, D.C., in the spring of 1972:

...(T)he Council takes the view that environmental protection laws carry with them a broad concept of standing to sue and has endorsed citizen suits to enforce federal environmental legislation.¹⁰²

5.4.2.3 Court Review of Agency Actions. The courts have traditionally been cautious about reviewing agency actions on other than questions of law. They have shown deference to the agencies for determinations of fact or exercise of discretion in the internal administration of agency programs. The courts have dealt with the latter types of decisions under the judicial principle that actions cannot be "arbitrary or capricious." In a suit brought under Section 4(f) of the Department of Transportation Act of 1966, which involves

¹⁰¹CEQ, Third Annual Report, p. 251.

¹⁰²"Citizen Suits Spur Court Probes of Environmental Impact," Electrical World, May 1, 1972, p. 28.

protecting public parks, wildlife refuges, and historic sites from encroachment by federal transportation projects, the Supreme Court laid the rules which lower courts should apply in considering the "arbitrary or capricious" principles in cases involving environmental issues. The landmark decision in this instance was the Citizens to Preserve Overton Park v. Volpe case.¹⁰³ In this case, the Supreme Court found that courts, in examining informal agency decisions:

...must examine the "full administrative record" on which the agency acted. They cannot be satisfied with after-the-fact "rationalizations" alone. When the record does not disclose all the factors considered, the reviewing court may require the responsible officials to explain their action. The agencies thus are encouraged to produce thorough, contemporaneous written records backing their decisions.¹⁰⁴

Agencies are required under NEPA to take environmental values into account to the fullest extent possible and to prepare an EIS for major actions significantly affecting the quality of the human environment. The courts are empowered to order agencies to comply in either case. The Act does not, however, attempt to dictate an agency's choice of action once compliance with NEPA's basic terms is assured. The courts have

¹⁰³ Citizens to Preserve Overton Park v. Volpe, 401 U.S., 402 (1971).

¹⁰⁴ CEQ, Second Annual Report, p. 169

been consistent on this issue in noting that:

...after an agency has considered environmental effects, its decision to act is subject to the limited judicial review afforded by the traditional arbitrary-or-capricious and substantial-evidence tests.¹⁰⁵

In the Overton Park case, the Supreme Court pointed out that an agency decision should be reversed under the arbitrary-or-capricious test if it can be shown that there has been a clear error in judgment. The agency's "inquiry into the facts is to be searching and careful...(but) the court is not empowered to substitute its judgment for that of the agency."¹⁰⁶ Another important case involving similar issues, but focusing on the meaning of the requirement to analyze alternatives in Section 102(2)(C) of NEPA is the Natural Resources Defense Council (NRDC) v. Morton. In this case, the Court of Appeals for the District of Columbia observed:

In this as in other areas, the functions of the courts and agencies, rightly understood, are not in opposition but in collaboration, toward achievement of the end prescribed by Congress. So long as the officials and agencies have taken the "hard look" at environmental consequences mandated by Congress, the court does not seek to impose unreasonable extremes....¹⁰⁷

Clearly, the courts are responding to citizen suits over environmental issues and they are broadening the meaning of "arbitrary or capricious" to include agency decisions in

¹⁰⁵ CEQ, Third Annual Report, p. 254.

¹⁰⁶ Ibid., p. 16.

¹⁰⁷ Ibid., p. 253.

that do not adequately account for the policies of the nation's environmental laws.

5.4.2.4 Validity of Implementing Regulations. All agencies have certain administrative obligations imposed on them by NEPA, by the President's order implementing NEPA,¹⁰⁸ and by the various "Guidelines" published by the CEQ. There are two major cases which deal with the validity of agencies' implementing directives. The first is the Calvert Cliffs' Coordinating Committee v. AEC case.¹⁰⁸ The other is the Greene County Planning Board v. FPC case.¹⁰⁹ In the Calvert Cliffs' case, the issue centered around the AEC's attempt to defer to the judgment of a State certifying agency as to the acceptability of an applicant's plans, with regard to water quality standards, for a nuclear powerplant. On July 23, 1971, the U.S. Court of Appeals for the District of Columbia rendered its decision in the case. It held that the AEC regulations implementing NEPA were not in compliance with the requirements of the Act in certain respects in the case of the AEC's licensing procedures. The Commission was ordered to "conduct strict environmental reviews of all plants, regardless of their stage of construction."¹¹⁰ The ruling affected roughly

¹⁰⁸Calvert Cliffs' Coordinating Committee v. AEC, 449 F. 2d 1109, 1113, 2 ERC 1179, 1781, 1 ELR 20346, 20348 (D.C. Cir. 1971)

¹⁰⁹Greene County Planning Board v. FPC, 455 F. 2d 412 (CA 2, 1972)

¹¹⁰"AEC Considers Environmental Impact of Power Reactors," Physics Today, November 1971, p. 62.

100 nuclear power plants that were completed, nearing completion, or just beginning construction. An industry source indicated that the additional review could double the \$250,000 costs involved in getting a plant licensed.¹¹¹

The Commission's rules were required to be changed to make provisions, in summary, for the following:

1. Independent substantive review of environmental matters in uncontested as well as contested cases by presiding Atomic Safety and Licensing Boards.
2. Consideration of NEPA environmental issues in connection with all nuclear power reactor licensing actions which took place after January 1, 1970 (the effective date of NEPA).
3. Independent evaluation and balancing of certain environmental factors, such as thermal effects, notwithstanding the fact that other Federal or State agencies have already certified that their own environmental standards are satisfied by the proposed licensing action. In each individual case, the benefits of the licensing action must be assessed and weighed against environmental costs; and alternatives must be considered which would affect the balancing of values.
4. NEPA review, and appropriate action after such review, for construction permits issued prior to January 1, 1970, in cases where an operating license has not as yet been issued. The court's opinion also states that, in order that this review be as effective as possible, the Commission should consider the requirement of a temporary halt in construction pending its review and the backfitting of technological innovations.¹¹²

The Federal Water Pollution Control Act was subsequently amended to allow the AEC and other permit-granting agencies

¹¹¹Ibid.

¹¹²U.S. Atomic Energy Commission, Rules and Regulations, Part 50, "Licensing of Production and Utilization Facilities," Appendix D-Interim Statement of General Policy and Procedure: Implementation of the National Environmental Policy Act of 1969, p. 163d.

to rely on State certifications that water quality standards are satisfied. The CEQ has taken note of the developments in the Calvert Cliffs' case, and makes the important point that:

...despite the stress in Calvert Cliffs' on an "individualized balancing analysis," the opinion does not say that an agency cannot turn to its own general rules to guide all or part of individual decisions. As already pointed out, NEPA requires an agency to balance all competing factors and to consider all reasonable alternatives. But it does not dictate that this be done entirely anew in each decision, without the assistance of general rules and past experience.¹¹³ Advance determination of program policy through rulemaking can implement NEPA, at the same time avoiding repetitious reexamination of basic principles in the context of each individual action.¹¹³

The Greene County v. FPC case resolved two important sources of complaints about the FPC's implementation procedures. Prior to the Supreme Court's denial of certiorari on October 10, 1972, on the Court of Appeals for the Second Circuit decision against the FPC, the Commission's procedures were attacked on two points. Environmentalists claimed that the FPC's procedures did not satisfy NEPA's requirement for a statement to accompany a proposal through the existing agency review processes. They also claimed that the agency's failure to circulate the draft statement to other agencies not involved in the licensing proceedings was in violation of NEPA's requirement to obtain comments from other agencies with expertise or jurisdiction in such matters.

¹¹³CEQ, Third Annual Report, pp. 229-230.

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¹¹³CEQ, Third Annual Report, pp. 229-230.

The CEQ analyzed the Court of Appeals decision prior to the Supreme Court's refusal to hear an appeal by the FPC. In discussing the appeals court decision, the CEQ stated:

...The court held that the FPC has "abdicated a significant part of its responsibility by substituting the (draft) statement of (the applicant) for its own" as the only document available prior to the hearing. Considering the FPC's hearing "an existing review process," the court said that NEPA would be satisfied only if "the agency's own" draft statement was prepared for the parties to see before the hearing. The court said that circulation of the applicant's draft to other agencies satisfied NEPA's consultation requirement. But it indicated that it would be preferable for the FPC to circulate its own draft, as the AEC does in similar formal licensing proceedings.¹¹⁴

In the light of the Supreme Court action not to consider the case, the FPC amended its procedures on December 18, 1972.¹¹⁵

These two cases are primarily concerned with the extent to which an agency's general regulations agree with the courts' interpretation of legal requirements imposed by NEPA. It is clear that a citizen may base an action on the degree of conformity between agency regulations and actual requirements of NEPA.

5.4.2.5 Incentives for Citizen Suits. A series of court decisions in widely scattered locations over the past year give indications that even more incentive now exists for citizens to challenge agencies in the courts. In a suit involving failure to conduct adequate environmental impact studies

¹¹⁴Ibid., p. 241.

¹¹⁵Federal Power Commission, Order No. 415-C, Implementation of the National Environmental Policy Act of 1969, December 18, 1972.

in a proposal for an Alameda County freeway, a U.S. District Court Judge ordered the California Highway Commission to pay the attorney's fees and those of expert witnesses for the case.¹¹⁶ A similar ruling was subsequently made in California Superior Court on a non-environmental issue.¹¹⁷ These actions opened the door to other such suits. For example, Business Week recently reported on two court decisions of importance to business:

Reasoning that cleaning up the environment is everyone's job, the courts are finding ways to ease the cost burden on citizens' groups that bring environmental suits. In Texas, a federal district judge ordered the private developer of a community project near San Antonio to pay the attorneys' fees of the plaintiffs....

In a separate case in Boston, a federal appeals court has ruled that citizens groups may recover attorneys' fees when they successfully sue the Environmental Protection Agency under the Clean Air Act.¹¹⁸

In the Texas case, the private developer was not a party to the suit. The suit was filed against the government, and the government had won the case. The plaintiffs had charged that the EIS was inadequate under the terms of NEPA. The judge's basis for awarding the losers the costs of their attorney's fees was that "since private citizens carry much of the burden of seeing that federal environmental policy is carried out, awarding

¹¹⁶"A Judge Invites the Public to Sue," Business Week, December 16, 1972, p. 82.

¹¹⁷Ibid.

¹¹⁸"Financing the Ecology Battle," Business Week, November 17, 1973, p. 87.

them their costs, even if they lose, will help insure that information concerning projects and their impact on the environment will become public."¹¹⁹

5.4.2.6 Future Developments. Although assessment of the currently emerging energy policies is beyond the scope of this study, it seems reasonable to predict that critics of NEPA will attempt to find ways to circumvent both the spirit and letter of NEPA under claims of priority needs for programs leading to increased amounts of energy. Such a prediction is somewhat easy to make in the light of previous complaints against the Act as well as the record to date on reliance on court action to force agency compliance with the law.

For example, a former Federal Power Commissioner, Mr. John Carver, Jr., believes the Congress should reexamine NEPA. According to Carver:

...(NEPA's) sole observable function has been that of furnishing a weapon of delay to those who would use it for that purpose....Nuclear plants have been stopped and a needed offshore lease sale derailed, not because some substantive standard was violated but because an inadequate piece of paper was filed. NEPA created a paper monster which threatens to strangle all processes of resource development....As a practical matter, I cannot think of a single standard or criterion of environmental quality that has come from that act....

...Mostly in private, but increasingly in public statements, concern is being expressed about the impact of the environmental emphasis on activities which are essential to modern life. Few public officials have been willing to grasp this political

¹¹⁹ Ibid.

nettle. I think it is safe to say that our country is now more conscious of the subject of energy than at any time in the past.¹²⁰

Another FPC Commissioner, Mr. Pinkney Walker, tends to support Carver's views. Walker considers Section 102 a "procedural nightmare," and believes that procedures, as interpreted by the courts, "require such a large volume of paper and analysis as to make the decision process never ending."¹²¹ Appearing before the Senate Interior Committee in March 1972, the former Chairman of the Atomic Energy Commission, Mr. James Schlesinger, noted that NEPA's requirement for impact statements is the:

...only "procedural" requirement of the statute that has been taken by the courts...for measuring agency compliance with the overall policy announced by Congress. While this corresponds on its face with traditional concepts of judicial review, and seemingly imparts an element of certainty to the agency implementation process, the unsettling reality is that NEPA's sweeping scope, its broadly stated social goals, and its meager legislative history combine to leave both the agencies and the courts with a formidable task of devising a workable implementation regime.¹²¹

The House Public Works Committee met in secret session in March 1972 to consider ways of circumventing the EIS requirements. The Committee's anti-NEPA bloc developed a strategy of amending "every major public works and highway bill with

¹²⁰"Clarification of The National Environmental Policy Act," Public Utilities Fortnightly, March 30, 1972, p. 38.

¹²¹Ibid., p. 36.

statements exempting the bill's projects from NEPA reviews."¹²²

By the spring of 1972 the House sponsor of NEPA, Representative John D. Dingell of Michigan, noted that agencies were:

...refusing to recognize that the statute requires them to consider environmental values at every stage of the decision making process....The result...is that agencies are thwarting the proper application of the environmental impact statement as well as making their task in complying with the act much harder and leading themselves into court reviews consuming much time and money.

The fallout from failure by federal agencies has been a feeling of outrage on the part of project backers and influential legislators....This has created a real and present danger of attacks on the provisions of Section 102....¹²³

Dingell's concern about "real and present danger of attacks" was increased by developments in the Nixon administration's response to the energy crisis. He believed that the amendments which the White House wanted the House to make to the Senate's version of the emergency energy bill "go much further than the needs of the crisis and would effectively make permanent changes in public laws."¹²⁴

His concern seems justified in the light of reports that President Nixon told 17 Governors of both parties that his "highest priorities in the energy crisis are jobs and an end

to the Arab oil boycott, ahead of the environment and Israel.

¹²²"Congressmen Sear Impact Statements in Secret Session," Engineering News Record, May 11, 1972, p. 111.

¹²³"Citizen Suits," p. 28.

¹²⁴Representative John D. Dingell as quoted by George C. Wilson, "Environmental Gains Threatened by Crisis," The Washington Post, December 11, 1973, p. A18.

to the Arab oil boycott, ahead of the environment and Israel."¹²⁵ Although he told the Governors that he would not turn his back on Israel or the environmental movement, he reportedly emphasized that both the environmentalists and the Israelis would have to retreat from their positions in order for the industrialized world to get through the fuel shortage. Of particular interest here is the statement attributed to the President that:

I'm going to have to propose some things that will drive the environmentalists up the wall, and they're halfway there already. How are we going to get the coal out of the ground without driving them out of their trees? ¹²⁶

Senator Edmund S. Muskie, an author of the Clean Air Act, shares Congressman Dingell's concern about the impact of the energy crisis on the gains which have been made by environmentalists. Noting that "there is definitely a real move away from the environmental cause," Muskie summarized the essence of environmentalists strategy under the current energy situation, which is to give way on environmental rules "where it makes sense to give," but to seek time limits on waivers of existing environmental protection requirements while doing "an educational job" on the point that energy and the environment is not an either-or proposition.¹²⁷

¹²⁵Thomas O'Toole and Lou Cannon, "Jobs, Oil Put Ahead of Environment, Israel," The Washington Post, December 22, 1973, p. A1.

¹²⁶Ibid.

¹²⁷Senator Edmund S. Muskie as quoted by George C. Wilson, "Environmental Gains," The Washington Post, p. A18.

The sentiments expressed above reflect both the hopes and frustrations of well-meaning legislators and administrators toward an Act which clearly imposes constraints on heretofore unhindered actions in the environmental arena. Notwithstanding the element of vagueness in the Act, however, it is clear that the courts have, thus far, been interpreting the intent of Congress in a manner which is favorable to the environment.¹²⁸ It will be yet a matter of time to see if the pressures of the "energy crisis" do in fact lead to a substantial reformulation of the Congressional mandate to protect and enhance the environment.

Protection of environmental interests is not, however, an exclusive province of Federal action. An increasing number of states have enacted legislation, patterned after NEPA, or issued executive orders which levy EIS requirements on state agencies as well as on private business entities in some cases. The following section is devoted to an examination of state level EIS requirements.

5.5 State Level EIS Policies. This section involves a brief examination of developments at the state level. The first part of the analysis is devoted to identifying the various States which have adopted EIS requirements. The second part is devoted to a comparative analysis of such requirements under the various state laws. Emphasis is given to the California regulations and experience.

¹²⁸In addition to the court cases cited above, the interested reader may turn to Harold P. Green, The National

5.5.1 States With EIS Requirements. As of July 1971, California, Washington, Delaware, Montana, and Puerto Rico had enacted laws requiring EIS's on state actions analogous to the statements required under NEPA.¹²⁹ By May 1972, similar provisions had been enacted by three additional states: Indiana, North Carolina, and Wisconsin.¹³⁰ Additionally, Hawaii and Michigan had implemented EIS requirements through executive order, and legislative proposals for comparable provisions were pending in over a dozen states.¹³¹

Environmental legislation continued and by February 24, 1973, additional EIS requirements had been enacted in Massachusetts, New Mexico, and Virginia. By then, also, Connecticut added such requirements by executive order.¹³² No additional states had adopted legislation requiring EIS's by the time the

Environmental Policy Act in the Courts (Washington, D.C.: The Conservation Foundation, 1972) for a useful treatment of cases under NEPA through April 1, 1972. See also works cited in Sections 3.2.4 through 3.2.7 and 3.2.12 above as well as J. W. Wilmer, Handbook of Judicial Decisions Involving Environmental Impact Statements (Arlington, Va.: Center for Naval Analyses, Research Contribution 224, 1973).

¹²⁹Council on Environmental Quality, 102 Monitor (Washington, D.C., May 1972), p. 1.

¹³⁰Ibid.

¹³¹Ibid. States with pending legislation included: Arizona, Colorado, Connecticut, Florida, Hawaii, Idaho, Illinois, Kentucky, Massachusetts, Minnesota, Ohio, Oklahoma, and New Mexico. Information about Michigan is contained in CEQ, "List of States with EIS Requirements," mimeograph, undated, but the latest entry referred to Virginia's House Bill 1541, which was enacted February 24, 1973.

¹³²CEQ, "List of States with EIS Requirements."

Council on Environmental Quality reported on the Second National Symposium on State Environmental Legislation in its April 1973 edition of the 102 Monitor.¹³³ The state of Texas had, however, adopted a "Policy for the Environment" which does not "require" the preparation of EIS's although they are "suggested" for project proposals by state agencies.

The source of the various state EIS requirements is indicated in Table 5-1 along with the name and address of the appropriate state official to be contacted for any additional information which may be desired.

A summary view of the information presented above and drawn from Table 5-1 shows that by April 1973, thirteen states and the Commonwealth of Puerto Rico had enacted legislation or issued executive orders which require the preparation of EIS's and a fourteenth state had adopted a policy which suggested that such statements be prepared.

Having identified the various states which require EIS's, it is now appropriate to turn attention to the nature of the requirements themselves. The following subsection presents a brief comparative analysis of each of the state's EIS requirements.

5.5.2 Variations in State EIS Requirements. The EIS

¹³³CEQ, 102 Monitor, April 1973. The symposium was held in Washington, D.C., April 9-11, 1973, under the sponsorship of the Council of State Governments, the CEQ, EPA, and the Department of the Interior. Participants included state legislators, administrators, and other officials active in state environmental programs.

Table 5-1
Environmental Impact Statement Requirements in the States

State	Relevant Legislation or Executive Order	Agency Information Source
California	California Environmental Quality Act of 1970 (Public Resources Code, Sec. 21000 et seq.)	John S. Tooker, Director Office of Planning and Research 1400 Tenth Street Sacramento, CA 95814
Connecticut	Executive Order No. 16, October 4, 1972	George Russell, Director Education Programs, Department of Environmental Protection State Office Building Hartford, CT 06115
Delaware	Delaware Coastal Zone Act (7 Delaware Code, Sec. 7001 et seq.). Ch. 175, Vol. 58, Laws of Del., June 28, 1971.	John Sherman, Chief Coastal Zone Management Delaware State Planning Office 530 S. duPont Highway Dover, DE 19901
Hawaii	Executive Order, August 23, 1971	Richard E. Marland, Interim Director, Office of Environmental Quality Control 550 Halekauwila St., Room 301 Honolulu, HI 96813

Source: Adapted from personal contact, CEQ, "List of States with EIS Requirements," and Thaddeus C. Tryzna, "Environmental Impact Requirements in the States," EPA research Contract No. 68-01-1818, Project Code 1H1095, reproduced in CEQ, 102 Monitor, April 1973, pp. 21-41.

Table 5-1 (Continued)
Environmental Impact Statement Requirements in the States

State	Relevant Legislation or Executive Order	Agency Information Source
Indiana	Public Law 98, 1972 (Indiana Code 13-1-10-1 to 8).	Oral H. Hert, Acting Technical Secretary Environmental Management Board 1330 W. Michigan St. Indianapolis, IN 46206
Massachusetts	Massachusetts General Laws, Ch. 781, Acts of 1972 (Ch. 30, Sec. 61 et seq.).	Harley F. Laing, Legal Counsel Executive Office of Environmental Affairs 18 Tremont Street Boston, MA 02408
Michigan	Executive Directive 1971-10, "Environmental Impact Review Requirement," September 30, 1971.	Mark Mason, Executive Secretary Advisory Council for Environmental Quality Office of the Governor Lansing, MI 48913
Montana	Montana Environmental Policy Act, 1971 (R. Code Mont., Sec. 69-6501 et seq.). (Supp. 1971)	Fletcher E. Newby Executive Director Environmental Quality Council Capitol Station Helena, MT 59601

Table 5-1 (Continued)
Environmental Impact Statement Requirements in the States

State	Relevant Legislation or Executive Order	Agency Information Source
New Mexico	Environmental Quality Control Act, 1971 (N.M. Stats. 12-20-1 et seq.).	David W. King State Planning Officer State Planning Office Santa Fe, NM 87501
North Carolina	North Carolina Environmental Policy Act, 1971 (N.C. Gen. Stats., Sec. 113A et seq.).	Arthur W. Cooper, Assistant Secretary for Resource Management Department of Natural and Economic Resources P. O. Box 27687 Raleigh, NC 27611
Puerto Rico	Public Environmental Policy Act (Law No. 9, June 18, 1970; 12 Laws P.R. Ann. Sec. 1121 et seq.).	Santos Rohena Betancourt Acting Executive Director Environmental Quality Board 1550 Ponce de Leon Ave., 4th Fl. Santurce, PR 00910
Texas	"Policy for the Environment" adopted by Interagency Council on Natural Resources and Environment, March, 1972.	Ed Grisham, Director Division of Planning Coordination Box 12428, Capitol Station Austin, TX 78711

Table 5-1 (Continued)
Environmental Impact Statement Requirements in the States

State	Relevant Legislation or Executive Order	Agency Information Source
Virginia	Virginia Environmental Quality Act (Code of Va.; Ch. 16, arts. 1-2, Sec. 10-176 to 10-185). (Approved April 10, 1972).	Gerald P. McCarthy Executive Director Council on the Environment Suite 1103 8th Street Office Building Richmond, VA
Washington	EIS's are required under the State Environmental Policy Act, 1971 (Ch. 43.21C, RCW) and the Highway Construction Environmental Review Law, 1971.	Dennis L. Lundblad Office of Planning and Program Development Department of Ecology Olympia, WA 98504
Wisconsin	Wisconsin Environmental Policy Act, 1971 (Wisc. Stat. Sec. 1.11 et seq.), Ch. 274, Laws of 1971 and also Ch. 273, Laws of 1971 which relates specifically to the Department of Natural Resources.	L. P. Voigt, Secretary Department of Natural Resources Box 450 Madison, WI 53701

requirements imposed in the fourteen states and Puerto Rico have been modeled for the most part on the 102(2)(C) requirements of NEPA.¹³⁴ A major area of difference which is apparent in the state by state analysis which follows is the scope of the EIS requirement. Some states limit the requirement to state level action while others extend the requirement to local agencies as well. A few states even levy the requirement on activities involving private entities.

5.5.2.1 California. One of the first state laws to establish an EIS requirement patterned after NEPA was the California Environmental Quality Act of 1970 (CEQA). The CEQA applies to any state or local agency project which "could have a significant effect on the environment of the state."¹³⁵ As will be discussed in Section 5.5.3, where the California regulations are examined in more detail, the law also applies to private actions which require a governmental permit.

5.5.2.2 Connecticut. The EIS requirement in the state of Connecticut is similar to the NEPA requirement, but

¹³⁴Material in this section is consolidated from various published sources. See "The Past Year-State and Local Activities," in CEQ, Second Annual Report, pp. 37-77; "The Past Year-Continuing State Progress," in CEQ, Third Annual Report, pp. 157-199; CEQ, 102 Monitor, May 1972, pp. 1-23 and April 1973, pp. 1-20; Reitze, Environmental Law, pp. One-52-One-56; and Thaddeus C. Trzyna, "Environmental Impact Requirements in the States," EPA research Contract No. 68-01-1818, Project Code 1H1095, reproduced in CEQ, 102 Monitor, April 1973, pp. 21-41.

¹³⁵California Environmental Quality Act of 1970 (Public Resources Code, Sec. 21100). Unless otherwise noted, all quotes are from Gerald R. Mylroie, Patricia A. Flanagan, and Randy Hey, California Environmental Law: A Guide, 2d ed. (Claremont: Center for California Public Affairs, 1972).

is applicable only to state projects and not to private projects for which a state permit is required. The executive order which created the EIS requirement was issued by Governor Meskill after he had vetoed a similar bill which was passed by the General Assembly in 1972 on grounds that it created difficult administrative problems. The EIS provisions of the executive order, however, are similar to those that were required under the vetoed legislation. The state created, in October of 1971, a Department of Environmental Protection, which consolidated most of the state's anti-pollution programs. The new Department replaced 16 independent agencies, boards, and commissions. It reviews impact statements, as does the Connecticut Council on Environmental Quality and the State Planning Council. The latter is responsible for recommending to the Governor whatever action is to be taken on proposed state actions.

5.5.2.3 Delaware. The Delaware Coastal Zoning Act, passed in June 1971, prohibited new heavy industrial development and strictly regulated all other new industrial development within a one to six-mile strip along the 100-mile Delaware Bay coast and along the 25-mile Atlantic coast. Although the Act does not impose a general requirement for EIS's, it does require that applicants for coastal zone permits submit an EIS for proposed manufacturing projects. The act does not allow additional oil refineries, basic steel manufacturing plants, pulp paper mills, or offshore bulk facilities, but does continue to allow garment factories, auto

assembly plants, and jewelry and leather goods factories to locate in the area, but only with state permits.

The Ex-Governor of Delaware, Mr. Russell Peterson, who led the efforts to ban oil refineries and off shore oil terminals, replaced Russell Train as the chairman of the Council on Environmental Quality when the latter shifted to be the Administrator of EPA.

5.5.2.4 Hawaii. The Hawaii EIS requirement was created by an executive order. Governor John A. Burns issued the order on August 23, 1971, and the review process is carried out in an agency of the Governor's Office, the Office of Environmental Quality Control. Within a year's time of the signing of the order, 46 statements covering projects built on state lands or with state funds had been filed with the Office of Environmental Quality Control. The statements dealt with such projects as state-sponsored housing, roads and highways and related facilities, boat launching ramps and harbors, school siting and construction, state park development, and dredging.

The executive order is similar to NEPA with respect to the EIS requirement, but applies to state agency projects. Governor Burns' administration is, however, supporting legislation which is being proposed to require both state and county agencies to evaluate the environmental impact of all projects involving state lands or funds and/or county lands or funds. The legislation would also empower state and county agencies to require EIS's from non-governmental entities.

5.5.2.5 Indiana. The Indiana law requires the same basic information required under section 102(2)(C) of NEPA. It applies only to state projects and contains a specific restriction against extending the requirement to the private sector. No state agency may require an environmental impact statement for the issuance of a license or permit. The responsibility for coordination and review are vested in the Governor's Office and the Environmental Management Board.

5.5.2.6 Massachusetts. Although the Massachusetts legislature enacted the state's EIS requirement in 1972, it did not become effective until July 1, 1973. The law applies to "any work, project, or activity" of "any agency, department, commission, or authority of the commonwealth or any authority of any political subdivision thereof..." Such wide scale applicability may account for the fact that companies which specialize in the preparation of EIS's have been formed to serve as consultants in the state. One such firm is the Environmental Impact Center of 5 Lee Street, Cambridge, Massachusetts 02139.¹³⁶

5.5.2.7 Michigan. An executive directive created the state's requirement for EIS's, but the Governor's Office is reported to be considering legislative recommendations to place the EIS procedure on a statutory foundation. The directive is applicable to all state agencies and requires EIS's on any policy, project, or administrative action. The latter

¹³⁶The President of EIC, Mr. A. C. Makrides, was kind enough to recommend the legal sources by Green and Wilmer in footnote 128.

is defined to include the issuing of permits. The Inter-Departmental Committee on Water and Related Land Resources is responsible for the EIS review function in the state.

5.5.2.8 Montana. Montana's Environmental Policy Act (MEPA) became effective on March 9, 1971. It requires an EIS to be included in "every recommendation or report on proposals for projects, programs, legislation and other major action of state government...." The Act established a 13-member Environmental Quality Council which is responsible for reviewing statements and coordinating the program. The Council includes representatives of the public, the legislature, and the Governor's Office, but is actually an agency of the legislature rather than the executive branch as in the case of NEPA. Under such auspices the Council is able to exercise an "oversight" role over the various executive agencies. It is empowered to investigate, on its own initiative or at the request of the legislature or of the public, agency compliance with MEPA or other of the state's environmental protection laws.

The Council issued interim guidelines for the preparation of EIS's in October 1971, and 53 impact statements or negative declarations had been filed with the Council by various state agencies by March 1972.

The EIS requirement is directly applicable to the private sector when a proposed action involves a license, permit, lease, or other entitlement from the state.

5.5.2.9 New Mexico. In 1971 the state of New Mexico passed its Environmental Quality Control Act. This act created a Council on Environmental Quality, but did not place responsibility for the EIS requirement under the Council. The Act requires an EIS to be included in "every recommendation or report on proposals for legislation and other state actions..." The administration is preparing a bill for an "Environmental Policy Act" to replace the existing legislation. The new bill provides for the Council on Environmental Quality to issue guidelines to state agencies, boards and commissions to insure that the agency decision making process includes "an appropriate and careful consideration of the environmental aspects of proposed action."

The 1971 law has received strong support in the courts. The New Mexico Court of Appeals noted in City of Roswell v. N. M. Water Quality Control Commission that the state law is patterned closely after NEPA and that it was surely the intent of the legislature that the NMEQCA should play the same role in the state as NEPA did at the national level.

5.5.2.10 North Carolina. One of the state laws with the broadest applicability of its EIS requirements is the North Carolina Environmental Policy Act (NCEPA). It requires EIS's to be included in "every recommendation or report on proposals for legislation and action involving expenditures of public monies for projects and programs significantly affecting the quality of the environment." The law authorizes, but does not require, local governments

to "require any special-purpose unit of government and private developer of a major development project to submit detailed statements...of the impact of such projects."¹³⁷ The Act defines "major development project" to include "shopping centers, subdivisions and other housing developments, and industrial and commercial projects."¹³⁸ The definition excludes projects comprising less than two contiguous acres. Only the Town of Holden Beach had actually adopted such a requirement by mid-1972. Guidelines for the state's EIS program have been issued by the Department of Administration. The Act requires the same basic information which is required in section 102(2)(C) of NEPA.

5.5.2.11 Puerto Rico. Just six months after the passage of NEPA, the Commonwealth of Puerto Rico adopted its Public Environmental Policy Act (PEPA). Enacted on June 18, 1970, PEPA created an EIS procedure which is identical to NEPA. The Puerto Rican law was the first state or territorial law requiring EIS's. Under PEPA an Environmental Quality Board was created in the Governor's Office. The Board has issued guidelines for implementing the Act which require that EIS's be developed for legislation proposed or reported

¹³⁷North Carolina Environmental Policy Act, Sec. 113A-8 (emphasis added).

¹³⁸Ibid., Sec. 113A-9(1).

on by agencies and "projects and continuing activities directly undertaken by commonwealth agencies; supported in whole or in part through commonwealth contracts, grants, tax exemptions, subsidies, loans, or other forms of financial assistance (or) involving a commonwealth lease, permit, license, certificate or other entitlement for use." The PEPA authorizes citizen suits to achieve enforcement of its regulatory provisions.

5.5.2.12 Texas. On January 1, 1973, the state's Interagency Council on Natural Resources and the Environment adopted a "Policy for the Environment." This is one of the least stringent provisions for EIS's at the state level. The policy "neither requires nor mandates its member agencies, but rather suggests and solicits the cooperation and coordination of its participants to appraise and improve the environmental effects of their activities and to develop new initiatives to abate environmental problems." State agencies are suggested to develop impact statements for "project proposals." The Interagency Council is chaired by the Governor and the program coordination is housed in an agency of the Governor's Office, the Division of Planning Coordination.

5.5.2.13 Virginia. The last state to adopt EIS legislation during the period covered by this report was the state of Virginia. The Virginia Environmental Quality Act (VEQA) was adopted on April 10, 1973. It imposed an EIS requirement for state agencies on construction projects that will cost more than \$100,000.

5.5.2.14 Washington. A very broad scope policy requirement for EIS's is found in Washington's State Environmental Policy Act. The Act is closely patterned after NEPA and impact statements are required on "proposals for legislation and other major actions..." The law applies to "all branches of government of this state, including state agencies, municipal and public corporations, and counties."¹³⁹ It applies to private actions in which a government permit is involved. Washington's Department of Ecology coordinates the program and has issued guidelines for implementing it.

5.5.2.15 Wisconsin. The EIS requirement in this state is imposed in the Wisconsin Environmental Policy Act (WEPA). It is also closely patterned after NEPA, but differs in two important respects. Under WEPA the EIS must "contain details of the beneficial aspects of the proposed project, both short term and long term, and the economic advantages of the proposal."¹⁴⁰ The Act applies to "all agencies of the state." While the Act requires a public hearing on every proposal other than for legislation, it does permit the holding of a public hearing as required under other statutes to satisfy the requirement. This Act does not specifically require an EIS on projects in the private sector, but a related piece of legislation pertaining to the activities

¹³⁹ State Environmental Policy Act of 1971, Washington Session Laws of 1971, Ch. 109, Sec. 3(2).

¹⁴⁰ Wisconsin, Laws of 1971, Ch. 274, Sec. 2(2)(C)(6).

of the state's Department of Natural Resources does authorize the Department to require an EIS from "an applicant for a permit or statutory approval" if the project is one on which the Department is empowered to act. The provision applies in those cases where the project would affect an area that exceeds 40 acres or the estimated cost of the project is greater than \$25,000. The state has created a Bureau of Environmental Impact which is responsible for investigating and evaluating the total impact of both public and private projects on the environment.

5.5.2.16 Summary of State EIS Requirements. The preceding subsections have highlighted the nature of existing state level EIS requirements. It may be noted that most of those states which have adopted such requirements have in fact based their policies on the NEPA model. There are several different variations in the state's laws which revolve around the issues of which levels of government are affected by the policies and whether or not the policies apply in the private sector. Only three states have laws which specifically apply to local agencies. These are California, Massachusetts and Washington. The North Carolina law authorizes local action, but does not require it. In all of the states having an EIS requirement except Connecticut, Hawaii, Michigan, and Texas the impact statement mandate is rooted in legislative action. In these states the EIS program is based on executive order. The private sector is directly obligated to provide

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EIS's in California, Montana and Puerto Rico under rather broad circumstances. North Carolina authorizes local authorities to require EIS's from private developers under somewhat limited circumstances. Delaware and Wisconsin also have provisions for requiring private applicants to submit EIS's under limited circumstances, but at the state level only. The Indiana law specifically precludes state agencies from requiring an EIS for the issuance of a permit or license. The Governor of Hawaii is supporting legislation which would enable state and county officials to obtain EIS's from the non-governmental sector.

5.5.3 The California Experience. The state of California has enjoyed the reputation of being an innovative and progressive leader. Although the Commonwealth of Puerto Rico was the first territorial entity to adopt NEPA style legislation, California was the first state to do so. The California Environmental Quality Act of 1970 (CEQA) is one of the broadest in scope of all the states which have adopted environmental laws similar to NEPA. The extent of the legislative intent is clear in the Act when it declared:

(g) It is the intent of the Legislature that all agencies of the state government which regulate activities of private individuals, corporations, and public agencies which are found to affect the quality of the environment shall regulate such activities so that major consideration is given to preventing environmental damage. 141

¹⁴¹CEQA, Sec. 21000(g).

The law applies at all levels of government throughout the state. This point is made clear in several sections of the law. The Legislature declared that it is the policy of the state to:

(f) Require governmental agencies at all levels to develop standards and procedures necessary to protect environmental quality.

(g) Require governmental agencies at all levels to consider qualitative factors as well as economic and technical factors and long-term benefits and costs, in addition to short-term benefits and costs and to consider alternatives to proposed actions affecting the environment. 142

The applicability of the law at all levels is also clear in portions of the law which pertain to environmental impact statements.

5.5.3.1 California's EIS Requirement. The EIS requirement and related implementing directives are contained in the second part of the Act following the Legislature's statement of findings and policy. The law directs that:

All State agencies, boards and commissions shall include in any report on any project they propose to carry out which could have a significant effect on the environment of the state, a detailed statement by the responsible state official...143

The "detailed statement" required in such cases is directed to contain virtually the same information required

¹⁴² Ibid., Sec. 21001(f) and (g).

¹⁴³ Ibid., Sec. 21100.

under NEPA, but California's law adds a sixth element:

(c) Mitigation measures proposed to minimize the impact. 144

The responsibility for coordinating the program within the state is assigned to the state's Office of Planning and Research, which, "in conjunction with appropriate state, regional and local agencies,"¹⁴⁵ is directed to:

...coordinate the development of objectives, criteria, and procedures to assure the orderly preparation and evaluation of environmental impact reports required by this (law). 146

The applicability of the law to local agencies to submit impact statements is unmistakable in the section of the act which provides that:

State agencies, boards, and commissions responsible for allocating state or federal funds on a project-by-project basis to local governmental agencies for land acquisition or construction projects which may have a significant effect on the environment, shall, unless exempted by formal procedures developed under the provisions of Section 21103, require from the responsible local governmental agency a detailed statement setting forth the matter specified in Section 21100 prior to the allocation of any funds, other than funds solely for planning purposes. 147

Even a layman's reading of the Act leads to the interpretation that it clearly imposes obligations on all levels of government. It's applicability to the private sector was

¹⁴⁴Ibid.

¹⁴⁵Ibid., Sec. 21103

¹⁴⁶Ibid.

¹⁴⁷Ibid., Sec. 21150. The references to Section 21103 and Section 21100 refer to passages quoted in footnotes 145 and 143 respectively.

not so easily discerned, however, and the issue became the subject of a landmark court decision which involved a good deal of controversy and confusion among local governmental units and private developers. The issue is examined in some detail in the following subsection.

5.5.3.2 Private Sector EIS's. On September 21, 1973, the California Supreme Court ruled that the CEQA required an EIS to "be filed with requests for building permits on all private construction where there is 'significant' impact on the environment."¹⁴⁸ In reporting on the affect of the court's decision, Business Week noted that:

California has required such statements on all state and federal public buildings since 1970, when its own Environmental Quality Act went into effect and when the National Environmental Protection (sic) Act was passed. Environmentalists have argued that the same standards should be applied to private buildings, too, and now the state's supreme court agrees. These impact statements include assessments of such things as the effects of construction on wildlife, ground and surface water patterns, the climate, and the esthetics of an area. Also, the possibility of earthquakes and surviving them may be assessed. ¹⁴⁹

The negative impact of the ruling on California's construction industry was substantial, but a number of environmental consulting firms realized a spurt in business. The largest such company expected a sales rise from \$13-million

¹⁴⁸"Why California Stopped Building," Business Week, October 21, 1972, p. 20.

¹⁴⁹Ibid.

in 1971 to \$20-million in 1972 because of new work in the environmental field.¹⁵⁰ The cost of these private sector EIS's depends on the job. An official of one consulting company indicated that "an impact statement for a new gaso-line station could cost anywhere from \$5,000 to \$10,000."¹⁵¹ The same executive noted that:

As a rule of thumb, any report on a project in environmentally sensitive Santa Barbara County will take twice as long as one in San Diego County. ¹⁵²

The decision referred to in the above discussion has established the applicability of the CEQA in the private sector in no uncertain terms. The discussion which follows analyzes the legal action involved in the case.

5.5.3.3 The "Friends of Mammoth" Decision. The milestone decision which confirmed the CEQA's applicability to private sector projects is known as the Friends of Mammoth vs. Mono County case.¹⁵³ Mono Co

Mono County was California's third smallest county in population with slightly more than 4,000 residents at the

¹⁵⁰Ibid., p. 21.

¹⁵¹Ibid., p. 20.

¹⁵²Ibid., p. 21.

¹⁵³Friends of Mammoth et al., Plaintiffs and Appellants, v. Board of Supervisors of Mono County et al., Defendants and Respondents; International Recreation, Ltd., Real Party in Interest and Respondent. Supreme Court of California, September 21, 1972, as modified on Denial of Rehearing, November 6, 1972. Except where otherwise indicated, all of the material in this section is drawn directly from the Supreme Court decision in the case, Sup., 104 Cal. Rptr., 761.

time of the legal action under consideration. The county is situated in the eastern part of the state between the crest of the Sierra Nevada mountain range and the border with the state of Nevada. The county is composed primarily of mountainous and open range land. Mammoth Lakes, the area of the county in which the legal action is centered, is a parcel of some 2,100 acres of land surrounded by a national forest. The Friends of Mammoth is described as "an unincorporated association of hundreds of resident and nonresident owners of lots or mountain residences at Mammoth Lakes, Mono County, California."

On April 20, 1971, International Recreation Ltd. (International) filed an application with the Mono County Planning Commission (Commission) for a conditional use permit to build:

Two multi-story structures housing 64 1,2,3, 4 bedroom condominiums plus 120 studio-type condominiums, a proposed restaurant and specialty shops... (w)ith ample parking and recreational facilities.

The project was to be built on a parcel of land about 5.5 acres in size, approximately 135 feet by 1,775 feet. It appeared from the record that six buildings of six to eight stories each were ultimately contemplated.

The Commission approved the use permit on May 6, 1971. About two weeks later several local residents, including two who were members of the class action suit, appealed the decision of the Commission to the Mono County Board of Supervisors (Board). The Board upheld the issuance of the permit on June 14, 1971.

A petition attacking the validity of the permit was filed by the Friends of Mammoth with the Court of Appeals on July 12, 1971, but it was denied "without prejudice to the filing of proceedings in the superior court." The plaintiffs, Friends of Mammoth, filed an identical petition with the Mono County Superior Court on July 19, 1971, but it was denied. The Friends of Mammoth appealed the decision to the Supreme Court, which "stayed the activities of International for which the conditional use permit and subsequent building permit were issued pending...disposition of the matter."

The California Supreme Court reversed the decision of the Superior Court on September 21, 1972, deciding in favor of the Friends of Mammoth's view that the county had erred in issuing the permit without having first developed an environmental impact statement, which was a violation of the CEQA.

The basic legal question in the case was whether or not the CEQA applied "to private activities for which a permit or other similar entitlement is required." The Supreme Court held that:

...the county board of supervisors...were required to consider whether the proposed construction might have a significant effect on (the) environment and if so to prepare an environmental impact report prior to its decision to grant the use permit.

In reaching the decision, the court examined the intent of the legislature, as embodied in the entire piece of legislation, the relationship between NEPA and the CEQA, and a particularly applicable section of the California Act.

In discussing the intent of the Legislature, the court cited various declarations from the opening sections of the Act¹⁵⁴ and concluded that there appeared "to be a clear legislative mandate the the EQA be given a broad construction and that it apply to private actions for which a permit is necessary...." The court observed parenthetically that it was supported in this view by a sworn declaration which the plaintiffs had included in their brief from the sponsor of the legislation that it was his intention that:

...the requirement of an environmental impact report extend to the situation where a state or local public agency by lease, permit, funding or comparable entitlement for use was authorizing or facilitating a private undertaking as long as there was a significant impact upon the environment. This includes situations such as zoning changes, conditional use permits and building permits. I communicated this intent to the other legislators in the course of the legislative process....

The court observed that the California law was patterned after NEPA and that the EIS requirement was the same in both pieces of legislation. It concluded that federal guidelines would require an EIS under similar circumstances.

The specific provision of the Act on which the suit was based was Section 21151, which reads as follows:

The legislative bodies of all cities and counties which have an officially adopted conservation element of a general plan shall make a finding that any project they intend to carry out, which may have a significant effect on the environment, is in accord with the conservation element of the general plan. All other local governmental agencies shall make an environmental impact report on any projects they intend to carry out which may have a significant effect on the environment and shall submit it to the appropriate local planning agency as part of the report required by Section 65402 of the Government Code.

Mono County did not have a conservation element of a general plan, so the issue turned on the second half of the section quoted above. The court noted that the phrase "they intend to carry out" meant only that "before an environmental impact report becomes required the government must have some minimal link with the activity either by direct proprietary interest or by permitting, regulating, or funding private activity." The court held that the broad purpose of the Act could not be:

...frustrated by procedural details surrounding the filing of reports, and those private projects for which no report is required under that section of Government Code relating to reports to planning agencies on acquisition of real property or construction of public buildings must still be proceeded by the environmental impact report.

Following its decision in September, the Supreme Court was asked by the state's Attorney General on October 13, 1972, to delay the effective date of its ruling, which was scheduled to take effect on October 21. The attorney general's brief noted that his office supported the court's decision, but asked for the delay in order "to give the California legislature a reasonable opportunity to adopt clarifying legislation."¹⁵⁴ The Attorney General also "urged that the ruling, regardless of its effective date, be given prospective application only, and not apply to any private construction projects that were

¹⁵⁴Bureau of National Affairs, Environment Reporter: Current Developments, (Washington, D.C.), October 13, 1972, p. 715.

begun prior to that effective date."¹⁵⁵ Asserting that such projects had been undertaken in good faith on an erroneous view that EIS's were not required, the Attorney General pleaded that equity required the court to acknowledge that the projects already existed, and that they should be permitted to be completed.

The court rejected both of the Attorney General's requests. It noted that in most cases in which such reports should have been prepared the statute of limitations would preclude legal action to require that they be subsequently prepared. It also stated its belief that "the majority of the private projects for which governmental approval will be sought in the future will present no risk of significant environmental effect and therefore will not require impact reports in any event." Noting that governmental agencies had already had ample experience with EIS's on public projects, it saw no reason to delay the effective date of its decision to give the agencies time to develop procedures for dealing with private sector problems. One almost detects a bit of court humor in its remarks about the bureaucracy's ability to respond to the challenge:

...To the extent such planning and experience prove inadequate to the task at hand, we do not doubt that with the good will and cooperation of all concerned appropriate new guidelines and

¹⁵⁵ Ibid.

procedures can be promptly devised. And if some delays nevertheless ensue in processing applications for certain private projects which threaten to have a significant effect on the environment, it should be remembered that such delays are implicit in the Legislature's primary decision to require preparation of a written, detailed environmental impact report in precisely those cases.

The immediate impact of the court's decision was confusion and frustration around the state by governmental agencies and developers alike. Some cities simply refused to issue building permits until more guidance was forthcoming from the state's Office of Planning and Research. Others reportedly told builders to proceed at their own risk. According to Business Week, the court's decision:

...sparked a series of frantic maneuverings around the state to fulfill the requirements. In San Jose, the city council...laid down a set of guidelines and provided personnel from its own planning and public-works departments to help developers and builders write impact reports. In San Francisco, the planning commission adopted guidelines on what the reports should include, and the city...start(ed) processing major building permits....¹⁵⁶

The state's legislature amended the CEQA in December 1972 to impose a 120-day moratorium of its applicability to private projects and some public projects in order to give agencies time to respond to the new situation. It also granted exemptions retroactively to private projects and some public projects. Basically, however, the law remains in force as it was originally enacted. Local governments were given until

¹⁵⁶"Why California Stopped Building," p. 20.

April 6, 1973, to adopt guidelines and procedures for implementing the EIS requirements, including provisions for a finding that certain "categorical exemptions" will not have a significant effect on the environment.

It is readily apparent that the trend toward more state level requirements for EIS's entails major benefits for the environment, but not without substantial effect on the day to day functioning of state and local governments. It may be concluded that the effect of adopting such legislative requirements or imposing them through executive order entails as great a problem of adjustment within the state bureaucracy as NEPA imposed on the federal bureaucracy. The problems associated with implementation of any major policy with such far reaching implications as NEPA or a similar state level Act do not end with the development of guidelines and procedures, however. Even after such guidelines are developed and agencies and applicants develop smooth operating procedures for complying with the requirement that such statements be prepared, there still remains the issue of carrying out the implementation of the project in such a manner as not to be harmful to the environment or, in other words, in accordance with the analysis contained in the EIS before a decision was reached to proceed with the undertaking. This is the subject of the following section, which deals with the issue only at the federal level.

5.6 Analysis of Federal Agency Control Procedures. This section presents the results of a survey of agency "follow-up" procedures during project implementation. As noted in Sections 1.10 and 2.2 above, a question arises concerning the implementation of a decision which has been reached after full compliance with the EIS requirements of NEPA. The question involves an issue of who has the responsibility to insure that a project is executed in accordance with the environmental analysis which was the subject of the EIS. A related issue concerns the adequacy of Federal procedures to insure compliance with the conditions or provisions of the EIS.

5.6.1 Data Sources. The data for this analysis was obtained in response to a letter "questionnaire" sent to twenty-six different Federal agencies. The Department of Agriculture included information from seven of its agencies, resulting in a data base of thirty-three different agencies.

Section 4.2.2.1 discusses the manner in which the agencies to be contacted was determined and the procedures followed to achieve a 100% response rate. The basic research instruments employed in this portion of the study appear in Appendixes A and B, the recipients and respondents are listed in Appendix C, and copies of the agencies' basic replies are attached as Appendix D. Unless otherwise indicated, all quotations in the remainder of this section are drawn from agency replies in Appendix D.

5.6.2 Project Implementation Responsibility. A basic question to be answered is whether or not agencies recognize that

their responsibility to ensure protection of environmental values does not end with the preparation of an environmental impact statement but extends, rather, throughout the entire implementation phase of any given project. Upon the answer to this fundamental question rides the judgment of whether or not the current generation of officials is, in truth, fulfilling its Congressionally mandated:

continuing responsibility...to use all practicable means, consistent with other essential considerations of national policy, to improve and coordinate Federal plans, functions, programs, and resources to the end that the Nation may--

(1) fulfill the responsibilities of each generation as trustees of the environment for succeeding generations;

(2) assure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings;

(3) attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;

(4) preserve important historic, cultural, and natural aspects of our national heritage, and maintain, wherever possible, an environment which supports diversity and variety of individual choice;

(5) achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities; and

(6) enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources. 157 (emphasis added)

The answer to the basic question also provides, of course,

¹⁵⁷ NEPA, Section 101(b).

a starting point on which to evaluate the adequacy of procedures to ensure environmental protection during project implementation.

5.6.2.1 Federal Agency Views. The agencies surveyed were asked if their "agency retains responsibility to ensure that a project is implemented in accordance with provisions of the Final Environmental Impact Statement, or is this a responsibility of the applicant/grantee in a given "Action?"¹⁵⁸ The agencies replies are summarized in Table 5-2. Several comments about these replies are in order.

The Advisory Council on Historic Preservation replied that: "It is our policy to entrust such vigilance to the Council on Environmental Quality (CEQ) and the agencies involved." The National Capital Planning Commission advised that "the Commission does not 'follow up' on the actions to be taken by Federal agencies during the implementation of proposed developments within the National Capital Region." The Water Resources Council, which has responsibility for conducting comprehensive water and related land resources planning activities, responded that "actions and programs identified in such plans are implemented by individual Federal, State and local entities." These three agencies are planning or advisory bodies which, in essence, review project plans of other agencies rather than initiate projects of their own.

Disregarding these three agencies for the moment, it may now be observed that virtually all the remaining agencies

¹⁵⁸Appendix A.

Table 5-2
Environmental Protection Responsibility During Project Implementation

Responsibility Retained by Agency	Responsibility Not Retained by Agency
Appalachian Regional Commission Atomic Energy Commission Delaware River Basin Commission Department of Agriculture Cooperative State Research Service Rural Electrification Administration Soil Conservation Service Animal and Plant Health Inspection Service Agricultural Research Service Forest Service Agricultural Stabilization and Conservation Service Department of Commerce Department of Defense Department of the Army (Corps of Engineers) Department of Health, Education and Welfare Department of Housing and Urban Development Department of the Interior Department of Justice Department of State Department of Transportation Department of the Treasury Environmental Protection Agency Federal Communications Commission Federal Power Commission Federal Trade Commission General Services Administration Interstate Commerce Commission National Aeronautics and Space Administration Susquehanna River Basin Commission Tennessee Valley Authority	Advisory Council on Historic Preservation National Capital Planning Commission U.S. Water Resources Council

SOURCE: Agency regulations, correspondence, and personal contact with agencies involved.

indicated that they exercised responsibility during project implementation. The nature of this exercise of responsibility seems to be rather consistent from agency to agency, and this issue will be examined in more detail in Section 5.6.3 pertaining to agency procedures in this regard. Ninety-one percent of the agencies surveyed reported that their agency retained responsibility during project implementation. It is, therefore, a finding of this study that agencies do in fact recognize that their environmental protection responsibilities extend beyond the mere preparation of an impact statement. For the present analysis, however, a few observations about this finding are in order.

First, the finding takes into account the reply by the Department of Health, Education and Welfare that, when their procedures are finished being revised, HEW would exercise responsibility to ensure that grantees implement projects in accordance with the terms of the EIS.¹⁵⁹

Second, the conclusion takes into consideration the Department of the Interior's use of the Bureau of Outdoor Recreation's grants-in-aid program "as a typical example of Departmental responsibilities."

Third, it should be noted that although the Susquehanna River Basin Commission simply replied that it did "not have projects underway that required NEPA review," it may be assumed that it operates in much the same manner as the

¹⁵⁹Paul Cromwell, Acting Director, Office of Environmental Affairs, Department of Health, Education and Welfare, telephone interview, May 18, 1973.

Delaware River Basin Commission, which noted that its "decisions on all projects are contained in dockets" which "usually contain certain conditions which must be met by the applicant" and that it is the responsibility of the applicant to comply with the terms and conditions of the permit.

Finally, the finding is reached despite the Department of Justice reply that all its projects are handled in-house by the General Services Administration, which does exhibit a commitment to environmental protection during project implementation.¹⁶⁰

The generally forthright discussion of the issue by the agencies involved in this study reveals a rather widespread concern for environmental values and is an encouraging finding which suggests that Federal agencies appreciate the need to do more than pay lip service to environmental protection issues. As the analysis in Section 5.6.3 reveals, however, there does appear to be a need for some policy guidance in this area from the CEQ. Before undertaking a discussion of the various agency procedures, though, it would be helpful to compare this finding on the Federal agency view of project implementation responsibilities with that of the CEQ.

5.6.2.2 The CEQ View. The Federal Trade Commission's original reply to the survey "questionnaire" letter was a referral to the Environmental Protection Agency and subsequent

¹⁶⁰Richard L. Kidwell, Chief, Space Management Unit, telephone interview, June 29, 1973.

referral to the Council on Environmental Quality. The CEQ's response was directed to the Federal Trade Commission and called for the FTC to respond to the survey letter. The CEQ's General Counsel expressed the Council position thusly:

...While the Council's guidelines describe the procedures for preparing environmental impact statements, and thus do not discuss the "follow-up" issue, we would assume that agencies retain responsibility to ensure that provisions or conditions contained in their environmental impact statements are subsequently carried out. If this does not conform with your agency's view, we would like to be so informed. 161

The FTC's ultimate reply to the survey letter does not refer to the CEQ's comments, but does note that the Commission "has as yet had no occasion to issue an Environmental Impact Statement, since (Section) 102(2)(C) does not apply to law enforcement investigations or adjudicatory proceedings, which form the bulk of the Commission's work." The Commission had already acknowledged that if it had any projects involving grants in which an EIS was prepared that it would retain responsibility.¹⁶²

The CEQ's letter to the FTC reveals the basic assumption underlying the absence of specific policy guidance on agency procedures during project implementation. Although the findings of this study tend to support that basic assumption, the analysis in the following subsection suggests that agencies

¹⁶¹Appendix D, p. 425.

¹⁶²Mary V. Todd, Office of General Counsel, Federal Trade Commission, telephone interview June 19, 1973.

could benefit from explicit CEQ guidance in this area.

5.6.3 Project Implementation Procedures. It is appropriate to turn attention now to some of the procedures which agencies follow in attempting to exercise their responsibility during project implementation. A number of agencies provided copies of relevant regulations in response to the request for such material in the survey letter. Such material, as well as elements of the replies contained in Appendix D, forms the basis for the analysis here concerning the adequacy of procedures for protecting environmental values during the implementation phase.

5.6.3.1 Agency "Follow-up" Procedures. The agencies were asked to provide a copy of their "procedural instructions for "follow-up" actions to be taken to ensure compliance with the Final impact statement" or to provide "a copy of the instructions given to the applicant/grantee as a condition of receiving the grant or license."¹⁶² Table 5-3 identifies those agencies who provided representative regulations, those who indicated that "follow-up" on environmental issues during project implementation was integral to their routine program administration procedures but failed to reference or provide copies of relevant directives, and those who indicated that no formal procedures for "follow-up" on the provisions of EIS's have been established within their agency. The

¹⁶²Appendix A.

Table 5-3

Character of Agency Responses to
Request for EIS "Follow-up" Directives

Type Response	Agency
Agency's reply includes material selected to illustrate procedures employed to protect environmental values during project implementation.	Atomic Energy Commission
	Delaware River Basin Commission
	*Department of Agriculture
	Soil Conservation Service
	Forest Service
	Agricultural Stabilization and Conservation Service
	Department of the Army (Corps of Engineers)
	Department of Housing and Urban Development
	Department of the Interior
	Department of Transportation
	Federal Power Commission
	Federal Trade Commission
	National Aeronautics and Space Administration
	Tennessee Valley Authority
Agency's reply indicates that procedures employed to protect environmental values during project implementation are integral to their routine program administration processes, but does not cite or provide copies of relevant directives.	Appalachian Regional Commission
	*Department of Agriculture
	Cooperative State Research Service
	Rural Electrification Administration
	Animal and Plant Health Inspection Service
	Agricultural Research Service
	Department of Commerce
	Department of Defense
	Department of Health, Education and Welfare
	#Department of Justice
	Department of State
	Department of the Treasury
	Environmental Protection Agency
	Federal Communications Commission
	General Services Administration
	Interstate Commerce Commission
	U.S. Water Resources Council
Agency's reply indicates no EIS "follow-up" procedures.	Advisory Council on Historic Preservation
	National Capital Planning Commission
	Susquehanna River Basin Commission

Source: Correspondence and personal contact with the various Federal agencies involved.

* Reply included material from agencies of the Department, but does not otherwise belong in either category of response.

Reply indicates that Department relies on services of the General Services Administration.

nature of agency procedures which were provided will be analyzed after a brief discussion of the other two categories of agency replies.

5.6.3.2 Agencies Reporting No EIS "Follow-up" Procedures. As noted in Section 5.6.2.1 above, both the Advisory Council on Historic Preservation and the National Capital Planning Commission are agencies which simply review project plans of other agencies. The former reports that it "has no procedures pertaining to a 'follow-up' on NEPA compliance" and entrusts such responsibility to the CEQ and the agencies involved. The latter notes that it "reviews the planning, design and environmental impact of proposed Federal developments," but that "it has no funding, inspection, or regulatory responsibilities regarding implementation." It seems reasonable to exclude these two agencies from further consideration on the issue of the adequacy of agency procedures to ensure protection of environmental values during project implementation.

As for the Susquehanna River Basin Commission, the assumption has already been made that its operating procedures would be similar to the Delaware River Basin Commission. Whatever conclusions are reached concerning the latter's procedures, therefore, will be assumed to apply to the former case.

5.6.3.3 Agencies Reporting Integrated Procedures. There were sixteen agencies whose replies suggest that they attempt to ensure consideration of appropriate environmental

values during project implementation through administration of their routine agency procedures. An appreciation for the type of approach followed may be gained by a quick review of these agencies' comments on the subject.

Appalachian Regional Commission: The instructions established pursuant to the grant determination and environmental impact statement process are those which the Commission expects to govern.

Cooperative State Research Service: ...the grantee assumes responsibility for conduct of the work in essential agreement with the proposed plan....CSRS also provides periodic monitoring through onsite review of research at the institutions.

No formal guidelines for such monitoring have been issued.

Rural Electrification Administration: ...REA intends to amend its present Staff Instruction for implementing NEPA requirements, to include these procedures....

...REA engineers review plans and specifications for proposed construction to ensure that the commitments made in the final environmental statement have been adequately covered. During and upon completion of construction, REA engineers and the borrower's engineers are responsible for monitoring the construction to ensure compliance with plans and specifications and the environmental statement commitments. (emphasis added)

Animal and Plant Health Inspection Service: We have no applicant-grantee relationship which requires an impact statement prepared by APHIS or the grantee and which would require monitoring or supervision by anyone other than this agency. In all previous environmental involvement, APHIS has provided such supervision.

Agricultural Research Service: ...ARS has no formal documentation processes for followup action during the project implementation phase.

Followup action, however, is inherent to our review process, since projects (whether research or construction) are designed to conform to their final environmental impact statements. We have construction inspections and periodic project reviews that will bring about corrective action in the same manner as discrepancies in other facets of the project activity are corrected.

Department of Commerce: ...in regard to follow-up responsibility on environmental impact statements. This type of action would generally occur in relation to EIS's prepared by our Economic Development Administration. They do incorporate such follow-up in their grant or loan supervision process either as a special condition to construction contracts or as part of the pre-construction monitoring of projects.

Department of Defense: ...various constraints generated by the assessment are included in the outgrant instrument. Periodic checks are made to insure compliance....It is the responsibility of the authorizing agency to insure compliance with the terms of the outgrant.

Department of Health, Education and Welfare: Our procedures are presently being revised. When they are published they will provide for agencies of the Department to insure that the grantee implements the project in accordance with the terms of the EIS.

Department of Justice: (Note: the agency reports that all its projects are handled in-house by the General Services Administration)

Department of State: The State Department has not issued any specific instructions relating to the follow-up of environmental impact statements although it is our policy to try to assure, where practicable, that the activities for which we are responsible are carried out in compliance with the expectations reflected in those statements that we prepare.

It should be noted that to date the Department of State has circulated three impact statements to the public. Two of these concerned conventions that are specifically designed to ameliorate international environmental problems....Under the terms of these agreements the United States is expected to assume some continuing obligations designed to reduce certain pollution problems. Hence in fulfilling its treaty obligations the U.S., in essence, also will be fulfilling the expectations reflected in the environmental impact statements that were prepared as background as part of our decision making processes.

In the third case a pipeline designed to carry highly volatile liquid hydrocarbons into the United States from Canada was the subject of one of our impact statements....subsequent to the preparation of the impact statement the permit that was issued to the pipeline company obliged the company to comply with the pertinent safety regulations issued by the Department of Transportation. It is our understanding that under the terms of these regulations the Department of Transportation has certain rights to inspect such lines to assure that they comply with the terms of its regulations.

Department of the Treasury: This Department has issued no special regulations concerning follow-up on environmental aspects during the implementation of any action...

We fully appreciate, however, that the filing of environmental impact statements with CEQ and the subsequent decision to take some proposed action carries with it the obligation to fulfill any terms and conditions of the particular statement. Such obligation normally falls within the assigned duties of the responsible Program Manager.

Environmental Protection Agency: Although EPA is not prohibited from following up on projects to see if changes discussed in the final EIS in response to our comments were actually incorporated in the project, resource limitations prohibit this agency from implementing such a follow-up procedure on a regular basis. We will follow-up, however, on certain very special projects such as the Alaskan pipeline.

Of course EPA should follow up on any actions it is responsible for. We do this automatically in our grant and contract programs. Continual monitoring of a contract ensures the contractor meets all requirements, including those resulting from any EIS that was prepared on the project. In the construction grants program, our regional offices must make a final inspection. Any requirements imposed by an EIS can be checked at that time. Provisions in our grant regulations give us substantial authority to induce a grantee to comply.

Federal Communications Commission: Directions regarding construction would be set out in the decision or in the construction permit.

The question of "follow-up" actions to ensure proper implementation of an action would thus relate to implementing terms of the construction permit rather than an environmental impact statement. The permittee is responsible for constructing the facilities in accordance with the terms of the permit. The Commission may make an on-site inspection but does not attempt to supervise construction activity. When the project is completed, the permittee applies for operating authority and must at this point be able to show that construction has been carried out in accordance with the term of the permit.

We rely primarily on representations made in the application for operating authority and view very seriously any deviation in such representations from a high standard of honesty and candor. Operating authority may be denied if the facilities do not conform to the permit or on the basis of misrepresentations by the applicant.

General Services Administration: ...a GSA International Environmental Conference on Building Construction and Use...resulted in the requirement that on GSA construction projects, the contractor must designate a member of his staff as Environmental Control Officer, who is functionally responsible for compliance by the contractor with environmental standards.

In addition the Conference also recommended a GSA review of the site selection process 2 to 5 years after project completion and a 1-year occupancy evaluation study and report to determine the validity of our actions. These processes...seem to tie in with the "follow-up" issue...and represent for us a beginning in (that) direction....

...(GSA) would appreciate hearing about any other "follow-up" activities you hear or suggestions you might have.

Interstate Commerce Commission: We...have attempted to implement the NEPA so that it has become an integral part of our decision-making process. Environmental assessments, reports, or impact statements are usually incorporated by reference into an accompanying order of this Commission...Our staff keeps a watchful eye on the transportation situation to assure compliance with our orders and to recommend new courses of action should changing circumstances so warrant. Because the NEPA has been so finely interwoven into our existing regulatory fabric, no additional regulations have been promulgated relating to "follow-up" actions on final environmental impact statement decisions.

U.S. Water Resources Council: The Water Resources Council has responsibility for conducting comprehensive water and related resources planning activities....Recommended actions...are implemented by individual Federal, State and local entities. The implementing actions are reviewed by the Council for consistency in areas which have approved regional or river basin plans.

...although Federal agencies have limited discretionary powers to adjust plans when implementing such plans, generally the authorization for the plan precludes major revisions of an approved project without additional review and/or authorization procedures or actions...Also, implementation of plans is frequently closely reviewed by Congress during the appropriations process.

Thus, for most agency programs the final assurances that implementation actions are carried out in accordance with approved plans rests in the authorization arrangements and precedents in regard to discretionary powers of the agency head to adjust plans applicable to that program, along with the review of the programs carried out in the appropriations process.

Close reading of these comments reveals a certain uniformity of approach toward exercise of agency responsibility during project implementation. As was concluded in Section 5.6.2.1 above, agencies generally recognize that their environmental responsibilities extend beyond the preparation of the EIS. It may be seen from the agency comments above, however, that virtually all the agencies reported on in this section execute their responsibility in this area by imposing certain terms and conditions on the applicant/grantee in a given action. The question then becomes, of course, a matter of judging how well existing procedures communicate environmental requirements to grantees and how well they provide for the agency to monitor grantee performance with regard to environmental issues. In the absence of specific regulations from this particular set of agencies, one must turn attention directly to their comments for judgment.

Immediate note is taken of the fact that both the Rural Electrification Administration and the Department of Health, Education and Welfare indicated that they are revising their regulations in a manner which will clarify the implementation obligations of both the agency and the grantee in a given action. It is impossible to say, of course, whether such revision was triggered by the questions raised in Appendix A or not. The important thing, however, is that such revisions are underway.

Of more direct concern is the fact that none of the other agencies cite specific directives, techniques, or procedures

for tying environmental considerations identified during the decision making process directly to implementation activities. Although all make reference to some kind of general process whereby constraints are placed against grantees, one would feel more confident that NEPA's policy objectives were being achieved with examples of procedural directives which make specific reference to environmental monitoring activities to be carried out during project implementation, especially on projects "major" enough to have warranted preparation of an EIS.

The EIS, of course, represents the most visible and concrete document which embodies the environmental considerations underlying an agency decision and one would hope that procedures exist which, at the very minimum, make reference to the existence of such a document in whatever outgrant instruments are prepared.

Evidence of such a minimum procedure is given by the Interstate Commerce Commission's statement that: "Environmental assessments, reports, or impact statements are ususally incorporated by reference into an accompanying order of this Commission." Further evidence is presented by the General Services Administration practice of requiring a contractor to "designate a member of his staff as Environmental Control Officer, who is functionally responsible for compliance by the contractor with environmental standards." It may be assumed that an Environmental Control Officer (ECO) would be intimately familiar with provisions of an EIS if one had been prepared in a given project. It would, however, be more

reassuring to see that the directives establishing this requirement contained definite arrangements for communicating the agency's environmental considerations to the ECO and outlined the specific environmental monitoring activities which the agency would carry out.

As anyone who has ever processed and obtained a building permit knows, such permits do not impose conditions on the builder to build in compliance with the internal policies, regulations, or procedures of the sponsor of the project. Whatever conditions may be imposed are those which are designed to ensure compliance with the appropriate planning, zoning and building regulations of the building permit issuing authority. Only in cases where the builder has made certain representations to the controlling authorities of practices to be observed as a condition of obtaining the permit would particular environmental obligations be imposed on the builder. This suggests a certain illogical transference of responsibility to local building departments by any agency which might hold a view similar to that of the Federal Communications Commission. It seems difficult to accept the idea that the policy objectives of NEPA are being satisfied if, as in the view of the FCC:

The question of "follow up" actions to ensure proper implementation of an action would thus relate to implementing terms of the construction permit.

Clearly, as the analysis of the Federal agency and CEQ views on implementation responsibility indicates, an agency retains its environmental protection obligations during the

project implementation phase and cannot pass them along as simply a function of a local building inspector. The issue is rightly seen as one of appropriate supervision or monitoring by the agency sponsor of a given project of its program relationships with contractors and grantees.

Despite these observations about agency comments on the issue of "follow-up" procedures, it would be premature to draw any final conclusions regarding the adequacy of existing policy guidance on the subject without examining the comments and regulations or procedures of the remaining agencies contacted as part of this study. An analysis of such comments and supporting directives is presented in the following subsection.

5.6.3.4 Analysis of Agency Procedures. It was noted in Table 5-3 that 14 agencies supplied material selected by the agency to illustrate procedures employed to protect environmental values during project implementation. The Department of Agriculture's reply was basically a transmittal of information from six of its member agencies, although it did note that: "Other Agencies of the Department have no need or only a rare need to prepare environmental statements." Thus, this section involves an examination of 13 agencies procedures which are assumed to provide the most specific information available on the issue of agency "follow-up" procedures. The analysis of these procedures is considered particularly significant in view of the finding from Table 5-4 that five of the agencies involved contributed almost 80% of

the impact statements filed with the CEQ during the first twenty-nine months of NEPA's existence.

Table 5-4
Environmental Impact Statements
Filed with the Council on Environmental Quality
Through May 1972 by Agency *

Agency	No. of EIS's	% of EIS's
Department of Transportation	1,696	57.8%
Army Corps of Engineers	438	14.9%
Atomic Energy Commission	83	2.8%
Federal Power Commission	52	1.8%
Department of Housing and Urban Development	34	1.2%
All Others	630	21.5%
Total	<u>2,933</u>	<u>100.0%</u>

Source: Adapted from Council on Environmental Quality, Third Annual Report, August 1972, p. 248.

* Includes all final statements and draft statements for actions on which a final statement had not yet been filed.

The analysis of agency procedures provided is presented on an agency by agency basis and is followed by a discussion of the conclusions which may be drawn from this and the preceding section.

5.6.3.4.A Atomic Energy Commission. The Atomic Energy Commission (AEC) replied that it retained responsibility during project implementation and that its Division of Regulatory Operations conducted frequent on-site inspections of licensee activities during and after construction. The AEC supplied a copy of its rules and regulations pertaining to the licensing of production and utilization facilities.¹⁶³ These rules, referred to as Part 50, set forth the requirements for licenses and other information related to the issuance, limitations, and conditions of licenses and construction permits. Part 50 contains data on codes and standards that must be met for pressure vessels, piping, pumps, valves, protection systems, and in-service inspections. Part 50's Appendix A contains 55 different design, fabrication, construction, testing, and performance criteria to be observed to assure safe operation. Appendix D contains the agency's regulations implementing NEPA, with amendments made in light of the Calvert Cliffs decision.¹⁶⁴

In addition to Part 50, the AEC also supplied a sample copy of Environmental Technical Specifications (ETS) for a nuclear power plant.¹⁶⁵ A separate document from the impact statement, an ETS is prepared by the licensee and sets forth

¹⁶³10 CFR, Part 50, "Licensing of Production and Utilization Facilities," October 15, 1971. Appendix D dated September 30, 1972.

¹⁶⁴See footnote 108.

¹⁶⁵Appendix B to Facility Operating License DPR-33 for Browns Ferry Nuclear Plant Unit No. 1, Tennessee Valley Authority, Docket No. 50-259, June 20, 1973.

limiting conditions for operation (LCO), design features and operating practices, environmental surveillance measures, and administrative controls. The Commission is preparing a guide for applicants on how to prepare such ETS's.

The LCO's specify certain environmental conditions to be maintained in such areas as thermal and chemical discharge, sanitary waste disposal, treatment of makeup water, and radiological matters. The administrative controls section "describes the administrative and management controls established to provide continuing protection to the environment and to implement the environmental technical specifications." Included in this section are specifications of actions to be taken if an Environmental LCO is exceeded as well as the establishment of a requirement for the development of detailed written procedures for environmental monitoring. The environmental surveillance section describes activities "designed to detect and measure the impact of plant operation on all elements of the environment." Included are various biotic and abiotic monitoring projects, with detailed specifications of the environmental values to be pursued.

The information provided by the AEC, particularly the sample ETS, gives evidence of comprehensive measures to achieve protection of environmental values during project implementation. It is believed, however, that more continuity, greater integration of planning and operating features of any project, and, hence, greater assurance of on-going consideration of environmental issues identified in the EIS process would be

realized if the Commission's NEPA implementing directives provided for the EIS to specify that its provisions would be cited in subsequent implementing directives, particularly the ETS. An example of such referencing appears in the following discussion based on material provided by the Delaware River Basin Commission.

5.6.3.4.B Delaware River Basin Commission. The Delaware River Basin Commission (DRBC) noted that its decisions on all projects are contained in dockets which generally establish certain conditions to be met by the applicant. It noted further that the EIS process "will sometimes bring to light certain aspects of a project which require special conditions in the Commission's docket decision."

The portion of the Commission's administrative manual pertaining to environmental statements specifies that:

...Each docket decision by the Commission will specifically include or refer to the environmental statement of any such project, and will make specific findings and conclusions with respect to the environmental effects of the project. 166

The date of submission of a final EIS to the CEQ was cited in the opening section of a sample docket provided by the Commission.¹⁶⁷ The "findings" section of the docket quoted the summary contained in the final EIS for the project

¹⁶⁶Delaware River Basin Commission, "Rules of Practice and Procedure," Administrative Manual-Part II, June 1972.

¹⁶⁷Docket No. D-70-141, Philadelphia Electric Company Expansion of Eddystone Electric Generating Station, Eddystone Township, Delaware County, Pennsylvania, November 8, 1972.

and concluded that:

The project does not conflict with nor adversely affect the Comprehensive Plan. It provides beneficial use of the water resources, is financially and physically feasible, conforms to accepted public policy, and does not adversely influence the present or future use and development of the water resources of the Basin. 168

Finally, the DRBC's approval of the project was made subject to a number of environmental constraints, included among which was a requirement for a daily report to the DRBC by the applicant on the water quality in the area of dredging operations. It also provided for the Executive Director of the DRBC to direct suspension of dredging operations under various conditions. The environmental constraints were generally based on issues raised in the EIS.

It is clear that such procedures are in keeping with both the letter and spirit of NEPA insofar as taking environmental values into consideration in the decision making process is concerned. They also serve as a good model for achieving a line of environmental continuity between the planning and approval stages of a given project. With regard to the "follow-up" issue, however, the procedures exhibit the same kind of weakness one observes in the comments of agencies reporting integrated procedures in Section 5.6.3.3 above. Other than the one requirement to submit a daily report on water quality, there are no specific monitoring activities established to ensure compliance with the various environmental constraints

¹⁶⁸Ibid., p. 8.

that were imposed on the applicant! This shortcoming is explicitly acknowledged by the DRBC response to Appendix A:

We do not have sufficient staff to undertake surveillance of all projects to determine whether they are being constructed in accordance with the terms and conditions of the Commission's approval. There are literally several hundred project actions every year and it would require substantial staff resources to monitor all of them. Our inability to provide full monitoring service applies as much to projects requiring an EIS as to those that do not. Upon occasion, the Commission has been made aware of the failure of an applicant to live up to the terms and conditions set forth in the Commission's docket, and we have taken followup action in such cases. However, the Commission has usually learned of these cases as a result of special circumstances rather than by routine staff followup as an organized program activity.

It is the responsibility of the applicant to comply with the terms and conditions contained in the permit. This is true whether or not the project involved is subject to an EIS. Finally, we do not have any procedural instructions for followup actions to be taken by the project sponsor.

The situation confronting the DRBC is strikingly similar to that described by other agencies considered in Section 5.6.3.3. Compare, for example, the DRBC statement above with that of The Appalachian Regional Commission's reply to Appendix A:

This responsibility (to implement a project in accordance with provisions of the EIS) resides in the applicant/grantee in a given "Action." The Commission does not issue any special instructions under these circumstances as a condition to receiving a grant. The instructions established pursuant to the grant determination and environmental impact statement process are those which the Commission expects to govern.

As in the case of most of the other agencies, the DRBC procedures place a burden on the applicant to give evidence of substantial compliance with the original terms of project

approval - UPON COMPLETION OF THE PROJECT!

Upon completion of construction of the approved project, the sponsor shall submit a statement to the Delaware River Basin Commission, signed by the sponsor's engineer or other responsible agent, advising the Commission that the construction has been completed in compliance with the approved plans....¹⁶⁹

Such a practice is commonly reported among the agency replies to Appendix A, but is in dramatic contrast to the program relationships described by the Soil Conservation Service in the following analysis.

5.6.3.4.C Soil Conservation Service. The Soil Conservation Service (SCS) response to Appendix A notes that an impact statement is prepared concurrently with each plan and is used to describe and analyze the project's impact, but that project details are actually contained in the watershed work plan. A Watershed Work Plan Agreement is executed by the sponsoring local organization (SLO) and agreements are made to install the project in accordance with the work plan. The SLO also agrees to operate and maintain the improvement works after installation. The responsible SCS official's endorsement of the Agreement entails a certification that:

Appropriate and careful consideration has been given to the environmental statement prepared for this project and to the environmental aspects thereof.

The watershed works of improvement is "carefully monitored

¹⁶⁹Ibid., p. 9.

to assure compliance with the work plan" and all "construction work is rigidly inspected by SCS to insure that completed works comply with approved plans and specifications." The SCS views the watershed program as a "joint 'cost-shared' activity rather than a 'grant' program" and it works "directly with the local agencies throughout the planning, design, and construction phases, and for at least three years after construction." Such a close working arrangement between the SCS and SLO eases the problem of maintaining agency cognizance of environmental issues throughout the project planning and implementation phases. Not all agencies have, nor should necessarily want to have, such a close program relationship with project applicants, but the extent of agency involvement in project planning and supervision of implementing activities seems to suggest an ideal model for insuring full realization of NEPA's policy objectives. Even without such close cooperation between agency and applicant, however, it is possible to develop procedural guidelines which provide for implementation monitoring by an agency which has developed an EIS on a given project. This point is clear in the following discussion of the Forest Service's monitoring policies.

5.6.3.4.D Forest Service. Included in the Forest Service reply to Appendix A was a copy of its regulations pertaining to environmental statements. A particularly relevant section of the directive reads, in part, as follows:

Major Federal programs and projects which may significantly affect the environment must

be carefully monitored during the life of the action to ensure that environmental safeguards are executed according to plan.

In some cases, it may be desirable to describe the planned monitoring program in the Environmental Statement.

As a part of general and functional inspections at all organizational levels, inspectors will review the results of plans to protect and enhance the environment. Such a review would compare actual results with planned results and would provide feedback to planners and decisionmakers...¹⁷⁰

It is impossible here, of course, to assess the success with which the agency's monitoring directive is being applied, but the important thing with respect to this study is the fact that such a "follow-up" directive even exists. It provides yet another piece for solving the puzzle of how to achieve on-going protection of environmental values during project implementation.

5.6.3.4.E Agricultural Stabilization and Conservation Service. The final agency of the Department of Agriculture to provide samples of directives or other material to illustrate its "follow-up" procedures is the Agricultural Stabilization and Conservation Service (ASCS). Noting that the agency's guidelines for preparation of environmental statements do not provide for follow-up action, the ASCS reports that the matter is covered by its guidelines for program participation.

¹⁷⁰ Forest Service, Title 1900 - Environmental Planning and Management, Chapter 1940 - Environmental Statements, Section 1943.5. The agency's inspection system is discussed in detail in FSM 1400.

Participants in the agency's programs do so on the basis of agreements or contracts entered into with them by the county ASC committee on behalf of the Secretary. The agency reports that compliance with such agreements is reviewed at various times as follows:

1. By the county committees under guidelines furnished by the Washington offices for each individual program and overall ASCS guidelines for determining program compliance.
2. State office spot check.
3. Review by the office of the Inspector General of county office operations including a review of some farms.
4. Periodic reviews by the General Accounting Office.

Close reading of guidelines for the reviews specified in paragraphs 1 and 2 above does not reveal any reference to environmental statements.¹⁷¹ Extensive directions are given on a wide range of compliance issues, including an excellent procedural statement for verifying compliance with the non-discrimination provisions of the Civil Rights Act of 1964. It is observed, however, that the ASCS procedures for determining program compliance do provide an excellent basis for obtaining information relative to monitoring specific environmental aspects of various programs on which an environmental statement had been prepared. There needs to be, however, specific environmental reporting criteria established in connection with such programs.

¹⁷¹Agricultural Stabilization and Conservation Service, 2-CP (Rev. 5), Part 8, "Extent of Farm Visits to Determine Program Compliance," and Part 17, "State Office Operations" respectively.

This observation is based on the ASCS use of random sample survey techniques to determine farms to be checked. Development of appropriate sampling plans holds great potential for all agencies with limited staff resources, such as the Delaware River Basin Commission, to improve their abilities to determine whether projects are being implemented in accordance with the terms and conditions of the agency's approval. More will be mentioned on this subject in Section 5.6.4, which presents conclusions on the subject of agency "follow-up" procedures.

5.6.3.4.F Department of the Army (Corps of Engineers). The Corps of Engineers follows practices similar to those which have been outlined for several of the other agencies. The Corps' reply to Appendix A noted that:

Corps of Engineers "follow-up" actions are based upon provisions in the planning decision document or certain restrictions or conditions identified in the permit application which are obligatory upon the non-Federal interest providing assurances of cooperation or upon the permittee. These documents accompany draft and final environmental impact statements through the Corps review process and provide a sound basis for the final decision on the proposed action. If the "follow-up" actions impact significantly on the environment, a thorough discussion of post-construction activities and the affected party's responsibilities for meeting these objectives will be included in the environmental impact statement. To insure compliance, completed projects or permit actions are inspected annually by representatives of the Corps and the affected local entity.

A sample form of agreement for local cooperation on a project was provided by the Corps and it has provisions for the Government to enter and inspect a project and to complete, operate, repair and/or maintain a project when deemed necessary.

The Corps' directive containing regulations for the preparation of environmental statements is rather comprehensive in its coverage and does indicate a clear policy commitment by the Corps that its environmental responsibilities go far beyond the EIS preparation stage.

From the initiation of pre-authorization planning through post-authorization planning and design, construction, and operation and management, all Corps of Engineers actions will be evaluated in terms of their impact on the environment within this overall policy. 172

Although the Corps' reply to Appendix A suggests that "a thorough discussion of post-construction activities and the affected party's responsibilities for meeting these objectives will be included in the environmental impact statement," the only section of its regulations which explicitly suggests such a procedure seems to be the one pertaining to disposal of land for port and industrial use. This section provides that the District Engineer in such cases will prepare a draft environmental statement which:

...will set forth, among other things, what the applicant intends to develop on the property and the possible uses to be made of it. It will also summarize all constraints which will be placed on the new owner, such as reversionary clauses, uses, needs for permits for structures or discharges into navigable waters, etc. 173

Inclusion of such constraints in the EIS, and their

¹⁷²Department of the Army, Office of the Chief of Engineers, "Preparation and Coordination of Environmental Statements," Regulation No. 1105-2-507, 16 February 1973, Section 4.a.

¹⁷³Ibid., Section 10.f.

subsequent referencing in the decision document, constitutes a good procedural step for ensuring consideration of environmental aspects beyond the EIS preparation stage. Broader use of such a procedure seems appropriate by the Corps and other agencies.

The Corps views public participation as an "integral part of the planning and administrative process," and its NEPA implementing directive adequately encourages such participation in both its pre-authorization and post-authorization project studies.¹⁷⁴

In the section of the Corps' regulations pertaining to permits for activities in navigable waters or ocean waters which deals with supervision and enforcement, the Corps notes that the "assistance of members of the public and personnel of other interested Federal, State, and local agencies to observe and report such (noncomplying) activities will be encouraged," and establishes procedures for obtaining such cooperation.¹⁷⁵ Inclusion of similar regulations in the NEPA implementing directive would go far to strengthen the continuity of environmental considerations from planning through implementing activities.

¹⁷⁴Ibid., Section 8.

¹⁷⁵Department of the Army, Corps of Engineers, 33 CFR Part 209, "Permits for Activities in Navigable Waters or Ocean Waters," Section 209.120(q). See Federal Register, May 10, 1973, p. 12227.

5.6.3.4.G Department of Housing and Urban Development. The Department of Housing and Urban Development (HUD) reply to Appendix A notes that responsibility for "follow-up" on approved actions varies, but that the usual pattern is to decentralize such responsibility.¹⁷⁶ In the case of "New Town" developments, the agency makes use of New Communities Liaison Officers in its regional offices to monitor various implementation activities. There is also an annual review session in Washington with the developers of such projects.

For other projects, however, "there is little in the way of systematic follow-up," and "there is a tendency to rely on local government entities, such as zoning and building officials."¹⁷⁷ If a violation is observed in such cases, it is expected that the individual or group noting it could so inform HUD with the expectation that appropriate corrective action would be taken.

There are two sections of HUD's environmental policy document which are particularly relevant. The first such section appears in connection with the statement of general policy:

When environmental clearances reveal conditions or safeguards which should be implemented once a project is approved in order to protect and enhance environmental quality or minimize adverse environmental impacts, such conditions or safe-guards shall be

¹⁷⁶Richard H. Broun, Acting Director, Community and Environmental Standards Section, telephone interview, July 9, 1973.

¹⁷⁷Ibid.

set forth as requirements in the contract, grant, or other documents which delineate the obligations of the recipient. The contractor's performance in meeting such conditions shall be monitored and evaluated as part of the normal project monitoring and evaluation. 178

A related section of the directive notes that: "Where benefits of the proposal outweigh environmental costs, processing may proceed; conditions or safeguards found to be necessary in order to protect and enhance environmental quality or minimize environmental impacts shall be set forth in the contract, grant, or comparable document..."¹⁷⁹

Commenting that HUD did not know the nature and degree of "follow-up" activity resulting from the above policy regulations because of their newness, the agency indicated that the Department was engaging in an evaluation of such activities.¹⁸⁰

HUD's regulations require an environmental analysis by applicants in a variety of program categories, most prominent of which are activities in the "New Town" category. As part of this environmental analysis, the developers are required to include an environmental management plan. Supplemental regulations for such projects describe such a plan

¹⁷⁸ Department of Housing and Urban Development, Handbook of Departmental Policies, Responsibilities and Procedures for Protection and Enhancement of Environmental Quality, July 1973, Section 3.b. See Federal Register, July 18, 1973, pp. 19182-

¹⁷⁹ Ibid., Section 5.d(4).

¹⁸⁰ Appendix D.

in the following manner:

Environmental management plan and program. A general plan and program for the management of the environment should be provided...Among the components of such a plan and program are environmental objectives, policies, and standards; a definition of incentives and development and use regulations and control for other entrepreneurs actually engaged in construction in the new community; a definition of the roles and responsibilities of relevant public agencies, the public and the developer with regard to the environment; and a definition of the organization and management approach of the applicant so that programs impacting the environment can be carefully programmed and monitored. 181

Samples of impact statements on two "New Town" proposals and HUD comments on a third such statement show that such information is translated into the final EIS as the basis of EIS provisions for controls to maintain environmental quality and forms the primary basis for "conditions or safeguards" to be "set forth as requirements in the contract, grant, or comparable document."¹⁸²

It is clear that the regulations of this agency represent a thorough attempt to insure agency cognizance of its environmental protection responsibilities from the inception of planning, through construction and on into long-run operational stages. It appears, however, that improvement is needed in

¹⁸¹Department of Housing and Urban Development, "New Community Development Corporation Instructions for Loan and Guarantee Assistance, Urban Growth and New Community Development Act of 1970," April 20, 1972, Section C.3.b(3).

¹⁸²Final EIS, San Antonio New-Town-In-Town, May 22, 1973; Final EIS, Beckett New Community, HUD-CPM-EIS-72-17D; and Staff Member Prybyla's "Comments on Proposed Draft (dated February 13, 1973) EIS for Pontchartrain New Town In-Town, New Orleans, La., March 8, 1973.

connection with monitoring projects during implementation, especially those other than the "New Town" variety. It is believed revisions to encourage public cooperation in project monitoring, such as those discussed in connection with the Corps of Engineers regulation, would represent an improvement in this regard. It is also felt that development of random sampling procedures such as those employed by the Agricultural Stabilization and Conservation Service would also assist in improving the agency's monitoring program.

5.6.3.4.H Department of the Interior. The Department of Interior's response to Appendix A is based essentially on the procedures of the grants-in-aid program of its Bureau of Outdoor Recreation (BOR). The BOR program is quite similar to several of those already discussed above.

Every project has prepared for it a project agreement (contract) which spells out, in both general and special provisions, who is responsible for various actions associated with the project...

Thus all grants projects, whether or not an environmental statement is involved, are subject to a series of checks and inspections to assure project objectives...

In its grants program, the Bureau and the States share the responsibility for follow-up to assure that the completed project fulfills its outdoor recreation purposes and objectives. This shared responsibility is discharged three ways:

- 1) The Bureau evaluates each project proposal (before approval) to assure that basic criteria, including criteria relating to environmental factors, are met...
- 2) Project administration (implementation) is the responsibility of the States...During construction the State is responsible, through periodic inspections, to assure that construction practices do not needlessly degrade environmental quality.

- 3) Once a project is completed, an inspection must be conducted by the State at least once every three years and an inspection report submitted to the Bureau. Environmental quality at the project site is a point specifically considered in the post-construction inspections...

Project agreements, supplemented by additional policy and procedural guidance...are the major basis for follow-up on grants projects. Where an environmental statement has been prepared for a project, it is taken into account by the Bureau to assure that compliance with stated project objectives is met.

The BOR directives supplied by the Department of the Interior in support of the program description given above reflects the essential elements of the procedures outlined. The regulations relating to project administration (implementation) also provide for "selective on-site review by Bureau personnel." The regulations pertaining to the triennial "post completion inspections" identify six points that should be taken into consideration, and the one for the environment reads simply: Environment. Is the quality of the area being maintained. The State Liaison Officer is directed to submit a written report giving the date of such inspections and describing any discrepancies and the corrective actions taken.

The major objection to the procedures outlined pertain to the absence of specific reference to environmental issues identified in the EIS process. It is felt that fuller realization of NEPA's policy objectives could be assured with more specific reference to environmental issues flowing from the EIS process. It is believed that substantial improvement in the environmental factor specified in the post

completion triennial inspections could be realized by the imposition of reporting requirements tied to compliance with protection measures and operating constraints indentified in the EIS.

5.6.3.4.I Department of Transportation. The Department of Transportation (DOT) supplied a copy of its NEPA implementing directive as its sole reply to Appendix A.¹⁸³ The Secretary assigned responsibility to oversee the Department's response to NEPA, in terms of both policies and procedures, to the Assistant Secretary for Environment and Urban Systems (TEU), in cooperation with the General Counsel.

The directive provided for each operating administration to submit its internal instructions or other appropriate regulations for implementing the Departmental Order to TEU for review. The operating administration's internal instructions were required to incorporate the main points of the Departmental Order (or include it as an attachment), "and provide for further specificity and applicability to the programs of the operating administrations, including identification of what should be considered "programs," "projects," or "actions" for purposes of 102(2)(C) statements."¹⁸⁴

With regard to "follow-up" activities, the DOT reply to Appendix A referred to Section 8.j of its NEPA implementing

¹⁸³Department of Transportation Order 5610.1A, "Procedures for Considering Environmental Impacts," December 4, 1971.

¹⁸⁴Ibid., Section 7.b.

directive, which pertains to "follow-up" activities. This section provides that:

- (1) Following a decision with respect to the final statements as described in subparagraph 8k above... (which refers to utilization of agency and public comments in the draft environmental impact statement) ...TEU will transmit the Secretary's decision to the originating administration. The administration will take the necessary steps, through its funding agreements and other contacts with the applicant, to assure that the actions to minimize adverse environmental effects, as spelled out in the statement or in the Secretary's approval (to the extent that it differs from the statement as proposed), will be carried out. Proposals to deviate from these actions as approved should be cleared with TEU.
- (2) In cases where the Secretary's approval differs from the applicant's proposal, the Administrator will advise the applicant of the details of the decision, and obtain the concurrence in writing from the applicant before permitting the project to proceed.
- (3) The operating instructions called for by paragraph 7 of this Order shall include procedures for monitoring these projects so as to assure that the Secretary's decisions are executed. The administrations will provide TEU with copies of the appropriate correspondence, agreements, statements of compliance and progress reports for this purpose.

Such a policy position on the need for specific "follow-up" measures and specific direction that operating instructions in response to NEPA "shall include procedures for monitoring these projects so as to assure that the Secretary's decisions are executed" epitomizes the kind of concern for "follow-up" activities which is the subject of this study. If fully implemented, such an agency policy and procedural response would greatly reduce any apprehensions about the adequacy of policy

guidance on the subject, especially since DOT contributed almost 60% of the EIS's submitted to the CEQ through May 1972.

With 1,436 EIS's on roads, representing 85% of DOT's total and 49% of all EIS's through May 1972, the Federal Highway Administration is the agency's major source of statements.¹⁸⁵ Its policy and procedure memorandum implementing NEPA, however, does not contain any mention of "procedures for monitoring" projects, nor does it include the DOT Order as an attachment to its directive.¹⁸⁶ It appears, therefore, that some revision to the basic FHWA instruction on environmental impact and related statements is necessary in order to more fully comply with its parent Department's basic Order on the subject.

It may be concluded that the basic DOT Order represents a quite satisfactory basic policy statement on the "follow-up" issue under study, but that translation of basic policy into specific procedures calls for action by TEU to review more closely the adequacy of DOT's operating administrations' directives for compliance with the basic Departmental Order.

5.6.3.4.J Federal Power Commission. The Federal Power Commission (FPC) reply to Appendix A noted that, whether an EIS was completed on a project or not, the Federal Power Act provided for engineers and environmentalists from the FPC to make on-site inspections of a project both during

¹⁸⁵CEQ, Third Annual Report, p. 249.

¹⁸⁶Federal Highway Administration, Policy and Procedure Memorandum 90-1, "Environmental Impact and Related Statements," September 7, 1972.

construction and after it was in operation.¹⁸⁷ Additional "follow-up" measures consist of annual reports submitted to the FPC by operators and environmental conditions which are commonly included in the licensing agreement.

The FPC exercises regulatory authority under the Natural Gas Act and under the Federal Power Act. Under the former authority it has adopted specific guidelines to be followed by natural gas pipeline companies in the planning, locating, clearing and maintenance of rights-of-way and the construction of aboveground facilities.¹⁸⁸ Under the latter authority it has adopted specific guidelines pertaining to the protection of natural, historic, scenic, and recreational values in the design and location of rights of way and transmission facilities at projects licensed or proposed to be licensed.¹⁸⁹

When the Commission revised its NEPA implementing regulations following the Greene County decision,¹⁹⁰ it received comments, in response to public notice of the planned changes, which suggested that the new directive did not give sufficient guidance in the preparation of impact statements.¹⁹¹ The FPC

¹⁸⁷ Allen F. Crabtree, Office of Environmental Quality, telephone interview June 29, 1973.

¹⁸⁸ Federal Power Commission, Order No. 407, July 10, 1970.

¹⁸⁹ Federal Power Commission, Order No. 414, November 27, 1970.

¹⁹⁰ See footnote 109.

¹⁹¹ Federal Power Commission, Order No. 415-C, December 18, 1972, p. 7. 18 CFR 2.80-2.82 contains the FPC's NEPA directive.

replied that the "regulations are meant to apply to actions involving a broad variety of activities; consequently, this section cannot provide detailed guidance for each application, but can offer only a broad framework within which individual statements must be prepared."¹⁹²

Nevertheless, the Commission did subsequently amend its NEPA implementing directive to include detailed guidelines for the preparation of applicants' environmental reports.¹⁹³ These guidelines spell out what the applicant must submit to the FPC staff as the basis for the staff to carry out its environmental analysis. In making the changes to its General Rules, the Commission was careful, in light of the Greene County decision, to note that "in the final analysis it is this Commission which has the ultimate responsibility for successfully meshing its various statutory mandates."¹⁹⁴

The guidelines call for the applicant under both the Gas and the Power acts to include information showing measures to enhance the environment or to avoid or mitigate adverse environmental effects and also to show measures for compliance with various regulations and codes.

¹⁹²Ibid.

¹⁹³Federal Power Commission, Order No. 485, June 7, 1973.

¹⁹⁴Ibid., p. 3.

A particularly relevant section pertaining to enhancement and mitigating activities provides that the applicant shall:

Identify all measures which will be undertaken to enhance the environment or eliminate, avoid, mitigate, protect, or compensate for adverse and detrimental aspects of the proposed action..., including engineering planning and design, design criteria, contract specifications, selection of materials, construction techniques, monitoring programs during construction and operation, environmental trade-offs, research and development, and restoration measures which will be taken routinely or as the need arises. 195 (emphasis added)

The applicant's environmental report is to "discuss provisions for pre-and post-monitoring of significant environmental impact of the proposed action" and include "programs for monitoring changes in the operational phases."¹⁹⁶

The report is to identify various health and safety codes to be complied with and "all other Federal, regional, state and local regulations and codes which must be complied with in the construction, maintenance, and operation of the proposed project."¹⁹⁷

Having access to such information for use in developing an EIS is clearly in keeping with NEPA's policy objectives. The real issue, however, boils down to whether or not the FPC does in fact insure that various enhancement, mitigating, and regulations and code compliance requirements are satisfied.

¹⁹⁵ Ibid., p. 22.

¹⁹⁶ Ibid.

¹⁹⁷ Ibid., p. 29.

Unfortunately, none of the documents supplied by the FPC present a specific monitoring plan to be followed by the Commission staff to insure that the various measures cited above are realized in a given project.

5.6.3.4.K Federal Trade Commission. As indicated in Section 5.6.2.2 above, the Federal Trade Commission (FTC) has not yet issued an EIS, "since (Section) 102(2)(C) does not apply to law enforcement investigations or adjudicatory proceedings, which form the bulk of the Commission's work." Material supplied by the Commission relative to its NEPA implementing procedures does not indicate any monitoring activities of the environmental aspects of a project. It does, however, call for the Director of the Bureau of Competition and Consumer Protection to:

...file a statement of Environmental Review annually detailing the environmental effects of a Rule or Guide, upon the existence of the following conditions:

- (1) The Rule or Guide was originally accompanied by an environmental statement; and
- (2) The Rule or Guide was promulgated three or more years previously; or, significant changes have taken place in the Rule or Guide or associated environment. 198

Given the nature of the work carried out by the FTC and the resulting inactivity in the EIS area, it seems quite reasonable to give its regulations only light regard in

¹⁹⁸ Federal Trade Commission, Bureau of Competition and Consumer Protection, "Environmental Statements - Rules and Guides," Section 5.

reaching a decision on the adequacy of policy in the area of "follow-up" activity.

5.6.3.4.L National Aeronautics and Space Administration. The reply to Appendix A by the National Aeronautics and Space Administration (NASA) notes that in the absence of CEQ Guidelines pertaining to "follow-up" activities its regulations do not "address this subject explicitly."

NASA's approach to the issue is found to be similar to that of a number of agencies already discussed above.

...our project management processes require adherence to approved project plans, whether the project is carried out in house or on contract. Proposed changes in project scope or content of a substantive nature require documentation and NASA approval; if these changes were likely to modify the environmental impacts in a significant way, they would come under the reassessment provision of our own regulation.

The "reassessment provision" of NASA's regulation is typical of that found in many agencies' NEPA implementing directives. It provides that "changes in ongoing activities or discovery of a hitherto unrecognized environmental effect stemming from ongoing activities, which warrant a reassessment may require a supplement to an existing statement."¹⁹⁹

As in the case of other agencies' procedures, there is an absence of specific guidance on actions to be taken to ensure that provisions or conditions contained in the EIS are subsequently carried out.

¹⁹⁹ National Aeronautics and Space Administration, NMI 8800.7B, Nov. 15, 1971, Section 6.a. See Federal Register, November 13, 1971, pp. 21753-21755.

5.6.3.4.M Tennessee Valley Authority. The final agency response to Appendix A to be considered is that from the Tennessee Valley Authority (TVA). Noting that TVA "retains responsibility to ensure that a project is implemented in accordance with provisions of its final environmental impact statement," the agency reports that its Division of Environmental Planning (DEP) has primary responsibility for "follow-up" action. TVA's Organization Bulletin, generally reflects the duties and functions of the DEP as outlined in the agency's reply to Appendix A:

...the Division of Environmental Planning recommends to the General Manager supplemental procedures as may be necessary to ensure implementation.

...it plans, formulates, and recommends policies and programs relating to implementation of protection and enhancement of the environment. In so doing, the division:

1. Collaborates with other offices and divisions in considering the environmental implications of major actions implemented by TVA;
2. Provides technical guidance and assistance to other TVA offices and divisions in implementing the environmental aspects of their activities;
3. Maintains liaison with CEQ concerning identification and development of methods and procedures of implementation;
4. Makes available advice and information useful in restoring, maintaining, and enhancing the quality of the environment;
5. Initiates and coordinates the utilization of ecological information in development of resource-oriented projects;
6. Monitors, conducts primary research on, and assesses actual impact of TVA actions on environmental quality.

TVA's Board of Directors essentially delegated such duties and responsibilities to the DEP in the portion of the TVA Code involving the agency's NEPA-implementing directives.²⁰⁰

Although the regulations do not give precise details on the monitoring activities to be carried out, it does appear that TVA has made a clear commitment to "follow-up" requirements in its NEPA directive by specifically delegating monitoring duties to a specific organizational entity. In this respect it provides yet another model to draw on in trying to improve agency policy and procedural response to NEPA.

5.6.3.4.N Summary of Illustrative Regulations. The nature of the work performed by the Federal Trade Commission puts it in a different category from the other twelve agencies whose procedures were examined in this section. It will, therefore, be excluded from this summary analysis of the foregoing sections.

Of the twelve agencies being considered, all, except the TVA, described their programs in terms similar to those used by the sixteen agencies discussed in Section 5.6.3.3 who reported integrated procedures but did not supply examples. Other than TVA, the programs described indicated that agencies exercised supervisory responsibility over various grant, regulatory, licensing, permitting, or "cooperative" arrangements

²⁰⁰Tennessee Valley Authority, TVA Code, Section XII, "Environmental Quality Management," October 15, 1971.

in which certain environmental constraints or conditions were imposed on various applicants, contractors, or local sponsoring organizations. The TVA program appears to be much more autonomous, but it, too, involves the same basic issue, i.e., monitoring activities during project implementation to assure that certain environmental conditions are fulfilled.

Although each agency indicated that "follow-up" was achieved through its normal review processes, only five of the twelve agencies had NEPA regulations that contained policy statements which referred explicitly to implementation monitoring requirements.

The Forest Service regulation notes that projects subject to EIS's "must be carefully monitored during the life of the action to ensure that environmental safeguards are executed to plan." It also provides, in some cases, for the planned monitoring program to be described in the EIS.

The Department of Housing and Urban Development regulation implementing NEPA provides that when environmental clearances reveal the need for environmental conditions or safeguards, the "contractors in meeting such conditions shall be monitored and evaluated as part of the normal project monitoring and evaluation." Even so, the regulation does not give any details as to "the normal project monitoring and evaluation." The HUD requirement was only adopted in July 1973, and the agency acknowledged that it did not know the "nature and degree" of "follow-up" activity resulting from the regulation.

HUD requires applicants to file an environmental management plan as part of its environmental analysis. This information provides the primary basis of its EIS provisions for controls to maintain environmental quality and for "conditions or safeguards" to be "set forth as requirements in the contract, grant, or comparable document." As will be seen, the environmental management plan called for by HUD is similar to the environmental report called for by the FPC and to the Environmental Technical Specifications report called for by the Atomic Energy Commission. In all three cases, however, the agency regulations do not specify the monitoring program which the agency will carry out on the basis of such information.

The Department of Transportation has an explicit requirement in its NEPA regulation calling for its operating administrations to develop NEPA regulations which "shall include procedures for monitoring (EIS) projects so as to assure that the Secretary's decisions are executed." Despite such a clear order for "follow-up" procedures to be included in subordinate unit directives, the overwhelming producer of impact statements within the Department of Transportation, the Federal Highway Administration, does not include such "procedures for monitoring" in its NEPA regulation.

The Federal Power Commission amended its NEPA regulation in June 1973 to provide guidance to applicants for the preparation of an environmental report to accompany applications. Among other things, the report is to identify measures to

protect the environment, including "monitoring programs during construction and operation." The report should "discuss provisions for pre-and post-monitoring of significant environmental impact of the proposed action" and include "programs for monitoring changes in the operational phases." Presumably such information from applicants will enable the FPC staff to develop control measures in their own EIS's, but the regulation as amended does not specify what kind of monitoring program the FPC shall carry out.

The Tennessee Valley Authority assigns primary "follow-up" responsibility in its NEPA regulation to its Division of Environmental Planning. The order enumerates a set of duties and functions to be carried out by that unit, among which is a monitoring responsibility.

In addition to these five agencies which have explicit reference to monitoring or evaluation functions in their NEPA regulations, two others have directives relating to "follow-up" on environmental impact issues, but do not cite them in their NEPA regulations.

The first of these is the Atomic Energy Commission. The AEC employs Environmental Technical Specifications, prepared by applicants in much the same manner as HUD's environmental management plan or FPC's environmental report, to obtain detailed information on what the applicant plans to do to protect the environment during project implementation. The agency's EIS regulation does not refer to the ETS nor specify what the AEC's monitoring program shall be.

The Corps of Engineers includes a section in its order pertaining to permits in navigable waters or ocean waters which establishes procedures for obtaining cooperation on monitoring noncomplying activities. Such procedures are not, however, included in the Corps' NEPA implementing directive. The Corps' NEPA regulations do contain a provision requiring certain detailed information from an applicant in connection with disposal of land for port and industrial use, but it does not specifically refer to monitoring or evaluation functions.

The Delaware River Basin Commission reports that it is unable to monitor its projects for compliance because of staff shortages.

The Agricultural Stabilization and Conservation Service employs random sampling techniques to determine which farms will be checked for compliance with its programs, but the procedures do not indicate monitoring activities directly related to environmental impact issues.

5.6.4 Findings, Conclusions and Recommendations Concerning Environmental Control Procedures. The foregoing analysis reveals that all of the 26 Federal agencies from whom information was solicited for this study responded, but in varying degrees of detail. The Department of Agriculture reply consisted basically of transmittal of information from seven of its member agencies. Thus, the findings derive from analysis of 33 different Federal agency programs.

5.6.4.1 Findings. Thirty (91%) of the agencies acknowledged that responsibility to "ensure that a project is implemented in accordance with provisions of the Final Impact Statement" is retained by the agency. The three (9%) agencies which indicated a contrary position were planning or advisory bodies which, in essence, review project plans to be implemented by other agencies.

Three agencies (9%) indicated that no EIS "follow-up" procedures had been developed. Two agencies (6%) were recognized to be engaged principally in law enforcement investigations or adjudicatory proceedings, which are not subject to NEPA's EIS provisions, and it was deemed appropriate to exclude them from further consideration concerning the adequacy of "follow-up" procedures. Twenty-eight agencies (85%) reported that control was achieved through integrated policies.

Of the 28 agencies reporting integrated control procedures, sixteen (57%) did not supply samples of their regulations to show how environmental issues identified in the EIS process were monitored during project implementation. Two of these sixteen agencies reported that their policies were being revised to provide for "follow-up" activities. One agency indicated that the issue was basically a matter of enforcing building permit conditions, but that the agency did not supervise construction. One agency reported that it did not have sufficient staff to "undertake surveillance of all

projects to determine whether they are being constructed in accordance with the terms and conditions of the Commission's approval." It also noted that on those occasions when it had been made aware of an applicant's failure to comply with terms of approval, it was the "result of special circumstances rather than by routine staff followup as an organized program activity."

Twelve agencies (43%) out of the 28 reporting integrated control procedures did supply sample copies of regulations, of which only five (18%) contained specific reference in their NEPA directive to monitoring activities during project implementation. These twelve agencies contributed almost 80% of all impact statements submitted to the CEQ during the first twenty-nine months of NEPA's existence. The five agencies which include monitoring requirements in their NEPA regulations contributed over 60% of the impact statements through May 1972. The monitoring requirement of the largest contributor (Department of Transportation - 57.8%) has not been incorporated into the NEPA implementing directive of its major EIS-generating operating administration (Federal Highway Administration - 85% of DOT EIS's and 49% of all EIS's nationally through May 1972), despite specific instructions in the DOT NEPA regulation to do so.

5.6.4.2 Conclusions. The foregoing analysis leads directly to two fundamental conclusions. The first is that agencies do recognize that their responsibilities for environmental protection extend beyond the mere preparation of an EIS.

The second is that agencies have not developed adequate policies and procedures to "ensure that a project is implemented in accordance with provisions of the Final Impact Statement."

The first conclusion supports the Council on Environmental Quality's assumption that "agencies retain responsibility to ensure that provisions or conditions contained in their environmental impact statements are subsequently carried out."

The second conclusion refutes the CEQ judgment, apparently based on that assumption, that it is not necessary to provide agencies with policy guidance on "follow-up" activities to be carried out in cases where a decision has been reached under the NEPA procedures. As the analysis has shown, however, agencies have not developed procedures with a sufficient degree of integration involving explicit monitoring and evaluation requirements to ensure that "provisions or conditions contained in their environmental impact statements are subsequently carried out."

5.6.4.3 Recommendations. It is recommended that the Council on Environmental Quality issue policy guidance to all Federal agencies which requires them to develop as part of their NEPA procedures explicit rules or procedures for ensuring adequate agency supervision of activities during project implementation so that environmental values given attention during the planning phase receive appropriate attention in the on-going project. Such rules should treat those cases in which there is an applicant/grantee/contractor

relationship as well as those cases in which a project is undertaken as an autonomous agency activity. The guidance should encourage agencies to consider development and use of sampling techniques for monitoring compliance with various environmental constraints.

This study contributes toward expediting development of an appropriate policy directive by identifying policies and procedures of a number of agencies which collectively provide a model on which to develop a comprehensive program to ensure protection of environmental values during project implementation.²⁰¹

Based on the fact that most agencies have developed their NEPA implementing procedures on the law and CEQ guidelines for the preparation of impact statements, it would seem that a revision to the guidelines themselves would be the most appropriate manner of issuing such "follow-up" guidance. Indeed, one agency specifically cites the absence of such guidance from the CEQ guidelines as the reason its regulations do not explicitly deal with the subject.

Such an approach to issuing the recommended policy guidance may not, however, be compatible with the Council's view on what constitutes appropriate material for inclusion in the guidelines. One could interpret the CEQ letter to the Federal Trade Commission on the "follow-up" issue as

²⁰¹ See Section 5.6.3.4.N for summary discussion.

reflecting a Council viewpoint that because the guidelines describe procedures for preparing environmental statements, they do not, therefore, discuss the "follow-up" issue.²⁰²

It is noted that the Council's guidelines were amended on August 1, 1973, with directions for agencies to make corresponding revisions to their procedures, all to be effective as of January 28, 1974. It is recognized, of course, that further revision to incorporate appropriate monitoring requirements represents an additional administrative load on both the Council and agencies. Nevertheless, given the urgent need for policy guidance in this area and the fact that most agencies look to the CEQ guidelines for guidance on all EIS matters, it is considered that revision of the guidelines represents the best approach to advising the agencies on this issue.

If, on the other hand, the Council believes that such revision to the guidelines is not sufficiently related to "preparation" issues, then such guidance could be disseminated in the form of a notice in the Federal Register or by direct communication with agencies.

In any event, issuance of such guidance should not be delayed simply because of administrative complications. Indeed, NEPA is explicit in noting that officials of the Federal Government have a "continuing responsibility...to improve and coordinate Federal plans, functions, programs, and resources..."

²⁰²See Section 5.6.2.2.

This policy recommendation is aimed at providing guidance to assist agencies in achieving fuller integration of plans, functions, and programs in a manner which will ensure "adequate agency supervision of activities during project implementation so that environmental values given attention in the planning phase receive appropriate attention in the on-going project." Such integration of agency plans, functions, and programs is, of course, an internal responsibility. This fact was appropriately expressed by the Federal Power Commission on issuing its guidelines to applicants for preparation of environmental reports when it observed that: "...in the final analysis, it is this Commission which has the ultimate responsibility for successfully meshing its various statutory mandates."²⁰³

It is optimistically concluded that issuance of such "follow-up" guidance will be of immense help to the agencies in meshing their statutory mandates.

²⁰³See Section 5.6.3.4.J

5.7 Chapter Summary. This chapter has examined the development and implementation of public environmental policy. Various theories of the environmental basis of society were discussed, ranging from early anthropogeographic theories to religious theories and to the modern ecosystem view of "spaceship" earth.

The legislative background of the National Environmental Policy Act was explored, as were its major provisions. One of its major provisions was the creation of the Council on Environmental Quality, the duties and functions of which were examined in detail.

The organization and functions of the United States Environmental Protection Agency were examined, including its relationship with the Council on Environmental Quality.

An analysis of the role of the Courts in implementation of the National Environmental Policy Act was presented. The analysis included consideration of the underlying reason for such extensive court intervention in connection with environmental issues, the citizen's right to sue, review of agency actions, the validity of implementing regulations, and incentives for citizen suits.

Brief consideration was given to possible future developments affecting current environmental policies in the light of governmental response to the country's energy problems.

A comprehensive analysis of current state level environmental impact statement requirements was presented, with attention noted to the requirements imposed on some private

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sector interests. Emphasis was given to the California law and experience.

The chapter concludes with a comprehensive analysis of Federal agency environmental control procedures. Based on a survey of agency practices, the analysis led to the conclusion that agencies generally recognize that their environmental responsibilities extend beyond simple preparation of an environmental impact statement but that agencies have not developed integrated policies to ensure that a project is implemented in accordance with provisions of the final impact statement. The latter conclusion supports an hypothesis which was established at the outset of this study. The analysis contributes toward rectifying this policy deficiency by identifying a number of agency policies and procedures upon which to draw in developing a comprehensive program to ensure protection of environmental values during project implementation. It was recommended that the Council on Environmental Quality amend its guidelines on the preparation of impact statements to reflect the needed policy and procedural improvements identified in this study.

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CHAPTER 6

THE ENVIRONMENTAL IMPACT STATEMENT PROCESS

6.1 Introduction. This chapter presents information on the procedures employed by Federal agencies in complying with the National Environmental Policy Act of 1969 (NEPA) requirement that all agencies of the Federal Government prepare a "detailed statement" concerning environmental issues "in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment."¹

The first part of the chapter identifies the source of Council on Environmental Quality (CEQ) guidance to agencies in carrying out the NEPA-mandated requirement to prepare an environmental impact statement (EIS).

The second part of the chapter presents a detailed discussion of the United States Environmental Protection Agency (EPA) procedures developed in response to NEPA and the CEQ guidelines. Included in this section is a discussion of the results of a brief biographical survey of agency personnel

¹The National Environmental Policy Act, Public Law 91-190; 83 Stat. 852 et seq; 42 USC 4321-4327; Section 102(2)(C). The "detailed statement" referred to in NEPA was defined in Section 1.5 of this study and the usage developed there will be employed throughout this chapter.

engaged in EIS activities.

The final section is an analysis of Federal agency EIS activities in the Southeastern United States. It presents findings of a study made of 23 different impact statements of ten different Federal agencies in the Southeast as well as comparisons between these statements and seven that were prepared by the Region IV Office of the Environmental Protection Agency.

As noted in Section 2.1 of Chapter Two, one of the major objectives of this study was to provide information on the EIS procedures of EPA as a source of guidance to others involved in the EIS process. Another major objective was to provide knowledge of the costs involved in the preparation of EIS's in order that budgetary procedures might be improved and so that consideration of such costs may be given in any policy review of such requirements. The latter two parts of this chapter present the information developed in pursuit of these two major research objectives.²

6.2 The Council on Environmental Quality Guidelines. The functions and role of the Council on Environmental Quality were analyzed in Section 5.3.3 of Chapter Five. It was noted there that the Council was assigned a duty by NEPA to, among other things, "review and appraise the various programs and

²The third major objective established in Section 2.1 was to provide information to policy makers about the nature and scope of guidance needed in connection with "follow-up" procedures during project implementation. Information on this objective was presented in Section 5.6 of Chapter Five.

activities of the Federal Government in the light of the policy set forth in title I of (the) Act..."³ The purpose of such review is to determine "the extent to which such programs and activities are contributing to the achievement of such policy, and to make recommendations to the President with respect thereto..."⁴

The President, in his directive to agencies to implement NEPA, directed the CEQ to, among other things, "issue guidelines to Federal agencies for the preparation of detailed statements...required by section 102(2)(C) of (NEPA)...."⁵

The instructions or "guidelines" of the CEQ represent the major source of guidance, other than NEPA itself of course, to agencies for preparing an impact statement. The remainder of this section identifies the various actions which the Council has taken in response to its charge to assist agencies in complying with Section 102(2)(C) of the Act.

6.2.1 Council Guidance Activities. The CEQ has initiated guidance to agencies on several occasions. Each of these are discussed briefly in the following subsections.

6.2.1.1 Interim Guidelines. Within two months after the President's directive, the Council issued its first

³NEPA, Section 204(3). See Section 5.3.3.1 for a full discussion of CEQ duties assigned by Section 204.

⁴Ibid.

⁵Executive Order 11514, March 5, 1970. Reprinted in 35 Federal Register, March 7, 1970, pp. 4247-48. Attached here as Appendix K.

set of directions on impact statements to all Federal agencies.⁶ The guidelines briefly set forth actions to be taken by agencies in response to NEPA and elaborated upon NEPA's provisions with respect to the content of impact statements. Agencies were directed to prepare their own internal procedures, which were to be "consonant with the guidelines," and file copies of such procedures with the Council.

The Council noted that it would issue supplements to the "interim" guidelines as seemed necessary "after examining environmental statements and agency procedures with respect to such statements..."⁷ Agencies were also directed to "assess their experience" in implementing NEPA's EIS provisions and in conforming with the guidelines and to report thereon to the Council by December 1, 1970. The agency reports were to identify problem areas and suggest revision or clarification of the guidelines "to achieve effective coordination of views on environmental aspects (and alternatives, where appropriate) of proposed actions without imposing unproductive administrative procedures."⁸

⁶Council on Environmental Quality, "Statements on Proposed Federal Actions Affecting the Environment; Interim Guidelines," April 30, 1970. See 35 Federal Register, May 12, 1970, p. 7390. See also Council on Environmental Quality, Environmental Quality--The First Annual Report of the Council on Environmental Quality (Washington, D.C.: Government Printing Office, August 1970), Appendix G, pp. 286-293.

⁷Ibid., Section 14(a).

⁸Ibid., Section 14(b).

6.2.1.2 Initial Revision to the CEQ Guidelines.

Following the Council's analysis of the agency reports called for in the "interim guidelines," the Council issued revised guidelines in the Spring of 1971.⁹ These 1971 guidelines called for agencies to continue assessing their experience in implementing NEPA's EIS requirements and conforming with the guidelines and for a report to be submitted to the CEQ by December 19, 1971.¹⁰ The Council again indicated that it would issue such supplements to the guidelines as seemed necessary after reviewing EIS's and the agency procedures.¹¹ Additional guidance, contained in the two memoranda discussed in the following subsection, was issued in 1972, but the guidelines themselves were not revised again until August 1, 1973.

6.2.1.3 CEQ Memorandums for Improving NEPA Procedures. The Council provided additional EIS guidance to agencies on two separate occasions during 1972. First, Chairman

⁹Council on Environmental Quality, "Statements on Proposed Federal Actions Affecting the Environment: Guidelines," April 23, 1971. See 36 Federal Register, April 23, 1971. For an analysis of major differences between these guidelines and the "interim guidelines" of April 30, 1970, see Richard N. L. Andrews, "Environmental Policy and Administrative Change: The National Environmental Policy Act of 1969, 1970-1971," (Ph.D. diss., University of North Carolina at Chapel Hill, 1972), Appendix B, pp. 475-480.

¹⁰Ibid., Section 12(b).

¹¹Ibid., Section 12(a).

Russell Train sent a memorandum to Federal agencies on February 29, 1972, in which he "drew attention to the continuing need for reviewing and improving agency NEPA procedures..."¹² In this memorandum he made two basic recommendations:

1. In particular we are interested in finding ways of consolidating numbers of impact statements into fewer but broader and more meaningful reviews.
2. On the matter of applying the NEPA statutory language "major Federal actions significantly affecting the quality of the human environment" to your particular agency programs and pinpointing the precise timing of the NEPA review and inter-agency consultations called for, your agency procedures must provide the specifics within the framework of the statute and our Guidelines. These procedures are important both in helping to identify the types of action on which impact statements are likely to be necessary and those where statements are not called for. 13

The second occasion for guidance came in "response to a variety of agency inquiries" and "procedural questions relating to the interpretations of existing provisions of the CEQ Guidelines..."¹⁴ Issued in the form of a memorandum from the CEQ's General Counsel, the Council advised agencies on substantive issues of the required content of EIS's as well as procedural issues involving the preparation and circulation

¹²Council on Environmental Quality Memorandum to Federal Agencies on Procedures for Improving Environmental Impact Statements, May 16, 1972.

¹³Ibid.

¹⁴Ibid.

of EIS's. The substance of both these memoranda has been incorporated in the current guidelines, which are discussed in the following subsection, "in one form or another."¹⁵

6.2.1.4 Current CEQ Guidelines. The current CEQ guidelines were issued on August 1, 1973, with an effective date of January 28, 1974.¹⁶ The latest revision incorporates the Council's response to public comments solicited as part of its rule-making process. The Council notes that two general themes ran through the majority of such comments:

...First, the Council should increase the opportunity for public involvement in the impact statement process. Second, the Council should provide more detailed guidance on the responsibilities of Federal agencies in light of recent court decisions interpreting the Act.¹⁷

For the first time since the Council began issuing such instructions, the guidelines are being codified in the Code of Federal Regulations.¹⁸ In part, this is being done:

...because they affect State and local governmental agencies, environmental groups, industry, and private individuals, in addition to Federal agencies, to which they are specifically directed, and the resultant need to make them widely and readily available.¹⁹

¹⁵Steve Sloan, CEQ staff member, personal interview, January 18, 1974.

¹⁶Council on Environmental Quality, "Preparation of Environmental Impact Statements: Guidelines," August 1, 1973. See 38 Federal Register, August 1, 1973, pp. 20550-20562.

¹⁷Ibid., Section 1500.

¹⁸Code of Federal Regulations, Title 40, Chapter V, Part 1500. Subsequent reference to the Council's current guidelines will employ the CRF citation format.

¹⁹CFR, 40, V, 1500.

One day after the new guidelines were published the CEQ sent a follow-up memorandum to the heads of Federal agencies reminding them of the obligations under the new guidelines:

...to revise their NEPA procedures for preparation of impact statements so that they conform with the Council's revised guidelines. This requirement applies to procedures issued at both the departmental and sub-departmental level. ²⁰ (emphasis added)

The follow-up memorandum identified fourteen major changes between the April 1971 guidelines and their replacement guidelines of August 1, 1973. Agencies were directed to publish revised NEPA procedures in proposed form before November 1, 1973, and in final form not later than January 28, 1974.²¹ Four of the changes in the new guidelines were geared toward increasing public involvement in the EIS process, however, and the CEQ urged agencies to implement them within 45 days after the new CEQ guidelines appeared on the first of August.

To achieve the increase in public involvement, the CEQ recommended early implementation of the following provisions pending formal revision of individual agency NEPA procedures:

1. Agencies should maintain lists of their impact statements under preparation, and their determinations that certain specific proposed actions do not require the preparation of an impact statement.

²⁰Council on Environmental Quality Memorandum for Heads of Agencies on Revision of Agency Procedures for Preparation of Environmental Impact Statements, August 2, 1973.

²¹CFR, 40, V, 1500.3(a).

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2. The minimum period for review of draft statements should be lengthened from 30 days to 45 days. The length of the review period should be calculated from the date of publication in the Federal Register of the Council's listing notifying the public of issuance of the impact statement.
3. Agencies should endeavor to provide impact statement materials free of charge, to the fullest extent practicable, or at a fee which is not more than the agency's actual reproduction costs.
4. A copy of the final impact statement for a proposed action should be sent to all parties who filed substantive comments on the corresponding draft statement.²²

These were among the most pressing changes which the Council wanted implemented, but it seems unwarranted to consider the other changes in as much detail here. A few general observations about the new guidelines are in order, however.²³

The new guidelines stress the need for early action by agencies in determining if an EIS is to be prepared. This is so that environmental considerations can be integrated into the decision making process, as intended by NEPA, rather than being "tacked onto" a decision which has already been reached.

Agencies are encouraged to employ "program" or "generic"

²²See footnote 20.

²³The general observations that follow are based on a summary analysis on NEPA developments in Council on Environmental Quality, Environmental Quality--The Fourth Annual Report of the Council on Environmental Quality (Washington, D.C.: Government Printing Office, September 1973), pp. 234-236.

impact statements in situations where a number of individual projects may be covered by a single statement. The advantage, of course, is that the number of statements can be reduced, thereby cutting redundancy and paperwork. If a future action is undertaken which was not adequately covered in such an umbrella statement, it would require a separate EIS.

A specific consideration of the secondary effects of an agency action must be included in the EIS under provisions of the new guidelines, particularly the effects on population concentration and growth. The emphasis given such considerations indicates the close relationship between the EIS process and the issues of Technology Assessment discussed in Chapter Seven of this study.

A final area of general interest in the new guidelines is the attention agencies must give to issues of energy conservation. The Council considers it:

...especially important to evaluate energy use and possibilities for energy conservation in comparing alternatives to a proposed action. It is often possible to adopt an energy-conserving modification of a plan or design without sacrificing the project objective. ²⁴

These have been the highlights of Council actions so far in fulfilling its duties to "review and appraise the various programs and activities of the Federal Government..." and to "issue guidelines to Federal agencies for the preparation of

²⁴Ibid., p. 235.

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detailed statements..."²⁵ It is apparent from the nature and frequency of the Council's activities that it is continuously monitoring developments in the EIS area. This is an encouraging sign that some appropriate response may be expected in the near future to the recommendation in Section 5.6 of this study for revisions requiring explicit "monitoring" procedures to be included in agency NEPA directives.

The following subsection consists of an analysis of the EIS procedures which have been developed by the Environmental Protection Agency. That discussion will serve to highlight specific aspects of the CEQ guidelines in somewhat more detail than was appropriate in this section.

6.3 NEPA Procedures of the Environmental Protection Agency.

The procedures developed by the Environmental Protection Agency in response to the CEQ guidelines and NEPA are analyzed in this subsection. The analysis serves to illustrate the basic EIS process required of all agencies under NEPA. As suggested in Section 1.7 of this study, it is believed that the unique concern of EPA with the setting and enforcing of pollution control standards makes it an ideal agency in which to examine the nature of the problems generated by the Section 102 provisions of NEPA. In light of the agency's mission, it is also believed that knowledge of its procedures should prove

²⁵See footnotes 3 and 5.

beneficial to others who must cope with environmental management issues, be they Federal or state agency officials or business managers seeking to satisfy a regulatory or licensing requirement or simply striving to operate in a "socially responsible manner." This latter view is strengthened in the light of EPA's broad involvement with other agencies actions:

...Because of its authority and expertise in the six primary areas of pollution control--air, water, pesticides, radiation, solid waste, and noise--EPA reviews virtually every impact statement that is filed. 26

The analysis of EPA procedures presented here includes consideration of its NEPA regulation for preparation of impact statements as well as its procedures for review of other Federal agency actions. Before undertaking such a detailed analysis, however, it is appropriate to briefly consider the basic NEPA requirement for impact statements.

6.3.1 The Basic NEPA Requirement. The basic NEPA requirement for impact statements is spelled out in Section 102(2)(C) of the Act,²⁷ the details of which are presented in Section 1.4 of this study. The Act outlines the general nature of the impact statement process and the CEQ's guidelines provide additional details which agencies must include

²⁶U.S. Environmental Protection Agency, Environmental Protection Agency: A Progress Report (Washington, D.C.: Government Printing Office, November 1972), p. 111.

²⁷NEPA, Section 102(2)(C). See footnote 1 regarding definitions used throughout this chapter.

in their own formal procedures to implement NEPA's policy requirements. The major stages of the impact statement process are outlined in the following subsection, which is followed by a brief consideration of the general requirements of agency EIS regulations.

6.3.1.1 Stages of the Impact Statement Process.

It is possible to identify four major steps facing every Federal agency in the basic impact statement process.²⁸ The process is illustrated in the flow-chart of Figure 6-1.

In Stage I of the process a Federal agency has to determine whether a proposed major action requires the preparation of an impact statement or not. If an EIS is not required in a given action, the agency should file a "negative declaration," which is defined as:

...a written announcement, prepared subsequent to the environmental review, which states the Agency has decided not to prepare an environmental impact statement. ²⁹

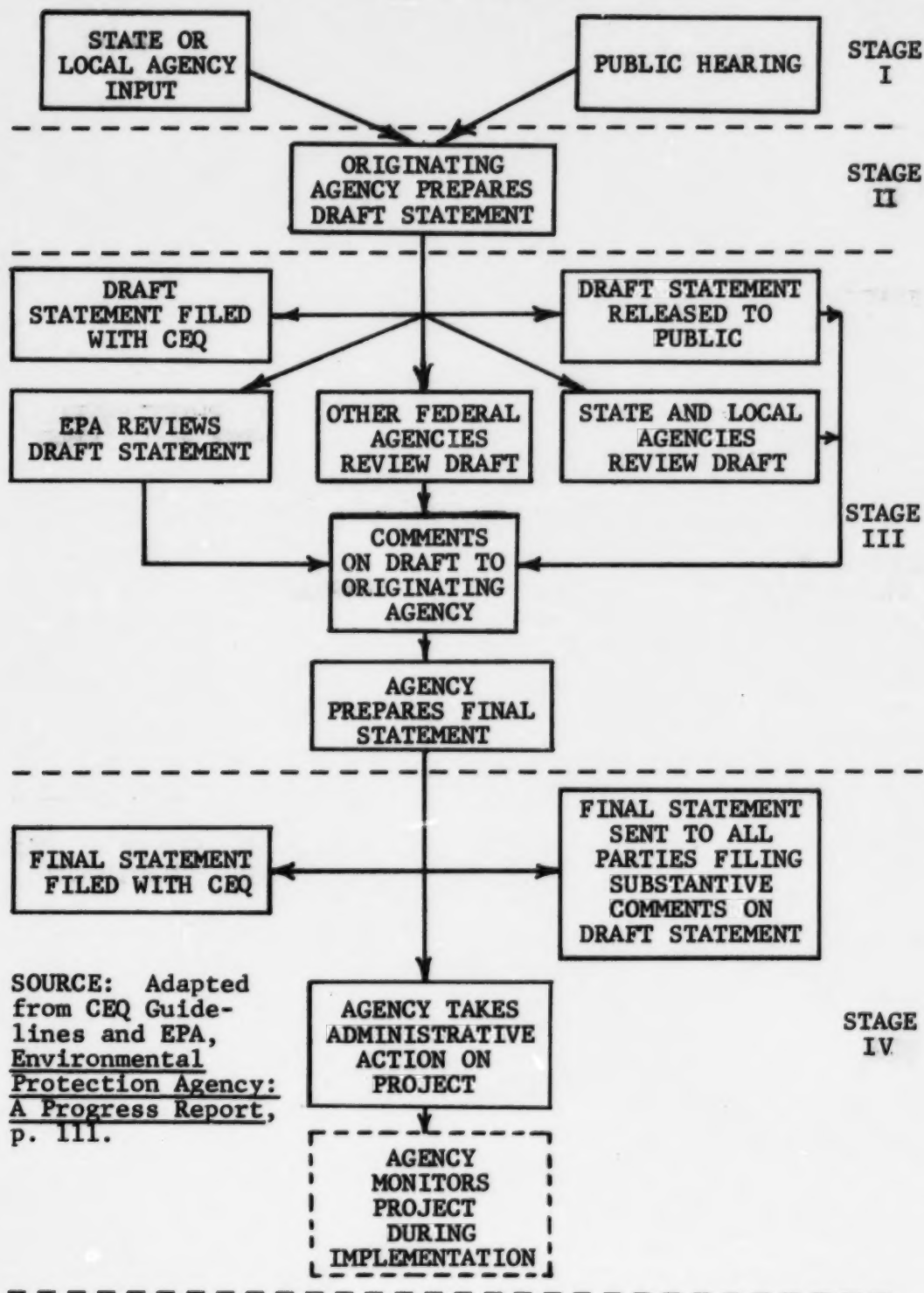
If there is any question about the appropriateness of a decision not to prepare a statement, the agency should at least document the basis for reaching such a decision.

In the second stage of the process the agency prepares a "draft" impact statement. A "draft" statement is a

²⁸ See Sheppard N. Moore, "The Environmental Impact Statement Process" (Paper delivered at the Environmental Impact Statements Workshop, Florida Technological University, Orlando, Florida, June 12, 1973). The flow-chart in Figure 6-1 is adapted from EPA: A Progress Report, p. 111.

²⁹ U.S. Environmental Protection Agency, "Preparation of Environmental Impact Statements: Interim Regulation," January 17, 1973, Section 6.11(d). See 38 Federal Register, January 17, 1973, pp. 1696-1712.

Figure 6-1
Stages of the Environmental Impact Statement Process



concept which does not appear in NEPA, but was established by the CEQ's guidelines of April 23, 1971.³⁰ The procedure of preparing a draft statement was developed to facilitate the consultation among Federal agencies which is required under Section 102(2)(C) of NEPA. In commenting on the provision of NEPA for such consultation, Chairman Train of the CEQ testified that:

...it was this provision which gave rise to our decision that draft statements should be developed. The concept of a draft statement does not exist in the statute at all, and it was our decision that in order for an originating agency to fairly and intelligently elicit the comments of a variety of other agencies there has to be one specific proposal to which all comments were being directed. This could only be done if some sort of a draft statement were prepared and that is required by our guidelines. 31

Stage III of the process involves the circulation of the draft statement for comment and preparation of the final impact statement. This entails distribution of the draft to various Federal, Federal-State, State, and local agencies having an interest in the proposed action. It also entails making the statement available to the CEQ and to interested

³⁰CEQ, "Statements on Proposed Federal Actions: Guidelines," Section 6(d) and 6(e).

³¹U.S., Congress, House, Committee on Merchant Marine and Fisheries, Administration of the National Environmental Policy Act - Part I. Report of Hearings held December 7, 8, 9, 10, 11, 16, 18, 21, and 22 December 1970. Statement by Russell E. Train, Chairman, Council on Environmental Quality, December 7, 1970, p. 53.

private groups and individuals. As part of its effort to increase public involvement in the EIS process, the CEQ lengthened the minimum period for review of draft statements from 30 to 45 days.³² It provided that the length of the period should be calculated from the date of the Council's list in the Federal Register notifying the public of the issuance of a given impact statement.³³ Upon receipt of comments from the various agencies, groups, and individuals to whom the draft statement was provided, the originating agency must then prepare the final impact statement. The final impact statement must include the originating agency's response to all the major comments received.

Finally, in Stage IV, the agency makes its decision as to whether or not to proceed with the proposed action. This decision is to be reached in the light of the environmental analysis contained in the EIS along with other relevant factors bearing on the agency's decision making process.

With this overview of the basic impact statement process in mind, it is appropriate to turn attention now to those factors which should be provided for in each agency's NEPA regulations.

6.3.1.2 General Requirements of Agency EIS Regulations. The latest revision to the CEQ's guidelines directed

³²CEQ, "Guidelines," August 1, 1973, Section 1500.9(f).

³³Ibid., Section 11(c).

each agency, "including both departmental and sub-departmental components" to review its EIS procedures and revise them "in order to respond to requirements imposed by these revised guidelines as well as by previous directives."³⁴ The general requirements established in the former guidelines remain applicable under the current CEQ directive. Essentially, each agency's NEPA regulations should:

1. Identify those agency actions requiring an environmental impact statement
2. Designate officials responsible for the statements.
3. Specify the general methods for obtaining information required in preparation of the statement.
4. Indicate the required content of an environmental impact statement.
5. Designate the appropriate time prior to decision to seek comments of other agencies.
6. Establish patterns for consulting with and taking into account comments of other agencies.
7. Describe the mechanism through which statements are to be made available to the public.
8. Provide for timely public announcement of plans and programs with environmental impact. ³⁵

The following subsection examines the manner in which EPA's regulations deal with these factors. Before undertaking such a detailed analysis, however, it is appropriate to note that the above list would be extended to nine different factors

³⁴Ibid., Section 1500.3(a).

³⁵Moore, "The Environmental Impact Statement Process," p. 6. Item 4 was not included in Moore's list.

if the recommendation in Section 5.6 of this study for revision of the CEQ guidelines to require explicit "monitoring" procedures is adopted.

6.3.2 EPA's Regulation for Impact Statement Preparation.

The Environmental Protection Agency is presently operating under an "interim regulation,"³⁶ pending publication of its revised directive in compliance with the latest CEQ guidelines. The interim regulation was published following public comment on the agency's procedures which were published in response to the CEQ's directive of April 23, 1971, that all agencies prepare their own formal procedures for implementing NEPA. This analysis is confined to consideration of the existing EPA regulations.

As part of its "Output Guidance" to its regional offices in connection with its EIS Management program, EPA established specific goals for EIS review and preparation during Fiscal Year 1974. In the "EIS Preparation" area, it established a mandatory goal "to improve substantially the agency's compliance with the NEPA regulations."³⁷ This goal was established, in part, because the CEQ had "expressed some concern about EPA's compliance with its NEPA regulations and its output of EIS's in comparison with that of other Federal agencies."³⁸

³⁶EPA, "Preparation of EIS's: Interim Regulation." See footnote 29 for full citation.

³⁷U.S. Environmental Protection Agency, "Operating Strategy and Output Description-EIS Management," February 15, 1973, p. 8.

³⁸Ibid.

Improvement in agency performance is viewed as largely a matter of increasing the output of EIS's prepared by each regional office and preparing either an EIS or negative declaration on all new grants. The increased output is to occur mainly in connection with the agency's wastewater treatment construction grants program, with responsibility on specific grants resting primarily with the regional offices.

The fact that EPA recognizes the difficulties involved in complying with NEPA and the need for specific action directed toward improving the level and quality of compliance strengthens even further the view expressed in Section 6.3 above that it is "an ideal agency" in which to examine the NEPA generated problems confronting all Federal agencies.

The agency's EIS regulation is structured in such a manner as to provide overall guidance to enable its operating units to comply with NEPA and the CEQ guidelines. This general guidance is then followed by additional instructions pertaining to specific types of agency programs, namely in connection with its wastewater treatment works program, research and monitoring projects and activities, air quality projects and activities, solid waste projects and activities, and construction of special purpose facilities and facility renovations. For purposes of this analysis, attention will be concentrated on the agency's general guidelines.

6.3.2.1 Actions Requiring an Impact Statement. The agency's regulation is generally consistent with the CEQ guideline in its treatment of the issue of determining when to

prepare an impact statement. It gives guidance with regard to "significant environmental effects" as well as "controversial actions." The agency provides for consideration of both primary and secondary consequences of short term and long term duration, including precedent-setting actions and the cumulative effects of individually small actions.

An EIS is required under NEPA in connection with "major Federal actions significantly affecting the quality of the human environment." The decision of what constitutes an action requiring an EIS is an individual agency decision, but the following list gives an indication of some actions that have been considered to be "major" or "environmentally significant" or both:

1. Actions whose impact is significant and highly controversial on environmental grounds.
2. Actions which are precedents for much larger actions which may have considerable environmental impact.
3. Actions which are decisions in principle about a major future course of action.
4. Actions which are major because of the involvement of several Federal agencies, even though a particular agency's individual action is not major.
5. Actions whose impact includes environmentally beneficial as well as environmentally detrimental effects. ³⁹

³⁹ Moore, "The Environmental Impact Statement Process," p. 7.

The agency identifies specific actions requiring EIS's in its supplementary parts of the basic EIS regulation. For example, nine different criteria are enumerated for determining the need for a statement in connection with wastewater treatment programs and ten different criteria are presented in connection with research and monitoring activities. Other program activities use more general criteria based on the basic EIS directive of the agency. This approach to identifying when a statement is or is not required has been incorporated into the new CEQ guidelines for other agencies to provide similar criteria for making determinations when a statement is required. The CEQ directs each agency to:

...review the typical classes of actions that it undertakes and...develop specific criteria and methods for identifying those actions likely to require environmental statements and those actions likely not to require environmental statements. ⁴⁰

6.3.2.2 Designating Responsible Officials. The CEQ guidelines direct that each agency shall establish "its own formal procedures for...designating the officials who are to be responsible for the statements..."⁴¹ EPA's regulation indicates that the "responsible official" will:

...usually be either a Regional Administrator or a Deputy Assistant Administrator. He is responsible for assuring that environmental reviews are conducted and, if necessary, that environmental impact

⁴⁰CEQ, "Guidelines," August 1, 1973, Section 1500.6(c).

⁴¹Ibid., Section 1500.3(a).

statements and other associated documents are prepared. 42

The responsible official is indicated in the various program supplements to the basic regulation. There is a question that arises at this point in the process concerning who has the responsibility for preparing the draft impact statement for circulation and who has the responsibility for the development of basic environmental data for inclusion in the report. The following subsection discusses the general methods for obtaining information required in the preparation of the statement, but it is appropriate to emphasize here that the:

...Responsibility for issuance of the formal impact statement rests with the Federal agency proposing to take the action. The Federal agency may not divest itself of this responsibility. 43

The EPA's organizational arrangements for carrying out the EIS preparation and review function is treated separately in Section 6.3.4 below, which includes an analysis of a biographical questionnaire distributed to the EIS personnel in each of the agency's ten regional offices.

6.3.2.3 Methods for Obtaining Environmental Data.

In the preceding subsection it was noted that the responsibility for preparation and circulation of the impact statement remains with the Federal agency proposing to take the

⁴²EPA, "Preparation of EIS's: Interim Regulation," Section 6.11(g).

⁴³Moore, "The Environmental Impact Statement Process," p. 8.

action. The agency may, however, require the applicants to submit environmental analyses to be used in preparing the agency's formal statement. The nature of the information gathering process depends largely on the nature of the agency's mission and program relationships with other participants in the process. A good deal of detailed insight into various agency procedures in this regard is provided in Section 5.6 of Chapter Five of this study and it is not necessary, therefore, to go into much more detail here. Two illustrative examples have been developed, however, which are helpful in clarifying the different procedures which are followed:

EPA, in its program for funding sewage treatment plants, requires applicants for a grant to submit documents called environmental assessments along with their applications. These environmental assessments must cover the topics which are covered in a formal environmental impact statement. EPA uses these assessments to help it decide whether an impact statement needs to be prepared. If one is to be prepared, EPA uses the assessments in drafting the impact statement. EPA's regulations specifically provide, however, that the EPA official in charge of writing the statement must assume responsibility for the reliability and comprehensiveness of all the data and analysis in the statement.

The Federal Highway Administration follows a somewhat different procedure in its funding of highways. Whereas EPA uses an applicant's environmental assessment as input to the writing of the draft statement, the Federal Highway Administration looks to the State highway agency for the full preparation of the draft statement. The Federal Highway Administration reviews this draft statement and takes responsibility for its contents. But the writing and analysis is fully performed by the State agency. 44

⁴⁴Ibid.

6.3.2.4 Required Content of Impact Statements. The existing regulations of the EPA require extensive amendment in order to be consonant with the latest revision to the CEQ guidelines, which include considerably more detailed guidance on what should be included in an impact statement than prior instructions offered. Rather than elaborate on elements of the existing EPA directive, therefore, this section will present information on what should be included in an impact statement according to the latest CEQ requirements. The following points should be covered:

1. A description of the proposed action, a statement of its purposes, and a description of the environment affected, including information, summary technical data, and maps and diagrams where relevant, adequate to permit an assessment of potential environmental impact by commenting agencies and the public.
2. The relationship of the proposed action to land use plans, policies, and controls for the affected area.
3. The probable impact of the proposed action on the environment, including consideration of secondary or indirect as well as primary or direct consequences, based on an assessment of the positive and negative effects of the proposed action as it affects various aspects of both the national and international environment.
4. Alternatives to the proposed action, including, where relevant, those not within the existing authority of the responsible agency, based on a rigorous exploration and objective evaluation of the environmental impacts of all reasonable alternative actions, particularly those that might enhance environmental quality or avoid some or all of the adverse environmental effects.
5. Any probable adverse environmental effects which cannot be avoided, such as water or air pollution, undesirable land use patterns, damage to life systems, urban congestion, threats to health or other consequences adverse to the environmental goals of NEPA.

6. The relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity.
7. Any irreversible and irretrievable commitments of resources that would be involved in the proposed action should it be implemented.
8. An indication of what other interests and considerations of Federal policy are thought to offset the adverse environmental effects of the proposed action. ⁴⁵

It is appropriate to note that items 3 through 7 in the above list relate directly to specified items in NEPA and are treated in basic particulars in the current EPA directive. Likewise, item 1 in the above list appears in previous CEQ guidelines and the existing EPA regulation, but in considerably less detail in each instance. Items 2 and 8 in the above list are new in the current guidelines of the CEQ and are not reflected in the EPA regulation.

6.3.2.5 Seeking Comments of Other Agencies. EPA's procedures provide for publication of a "notice of intent," which is a device for obtaining early public and agency involvement in the planning and preparation of a draft statement. This procedure is in keeping with a recommendation of the CEQ to agencies for improving NEPA procedures.⁴⁶ The provision was carried forward into the latest CEQ guidelines.

The CEQ guidelines also contain provisions for the originating agency to circulate the draft statement to appropriate agencies for comment, but the time limit for

⁴⁵CEQ, "Guidelines," August 1, 1973, Section 1500.8.

⁴⁶See footnote 12.

review of draft statements was extended from 30 to 45 days. The current EPA regulation provides for commenting agencies to "have at least thirty (30) calendar days to reply," so a revision is required to comply with the latest CEQ guideline on this subject.

6.3.2.6 Consultation with Other Agencies. The portion of the EPA regulation, discussed in the preceding section, which establishes procedures for seeking comments of other agencies contains specific steps to be followed in circulating the draft statement.⁴⁷ The procedures are quite precise as to specific actions to be taken, including public notifications to be made, in connection with the draft statement and the "notice of intent." These procedures are in full compliance with the CEQ directives on this issue, and serve as good models for all agencies to follow to ensure adequate consultation is obtained with other agencies. It should be noted, however, that the latest CEQ guidelines contain an expanded appendix of agencies having interests in various categories of environmental impact and the EPA regulation will need to be revised to ensure appropriate coordination with such agencies.

6.3.2.7 Making Statements Available to the Public.

Public notification of the agency's intention to prepare an impact statement is sent, as a matter of routine, to

⁴⁷EPA, "Preparation of EIS's: Interim Regulation," Section 6.23.

"Potentially interested persons."⁴⁸ This procedure entails development of a mailing list of interested groups and individuals who have expressed concern with environmental issues. In addition, a brief news release "informing the public that an impact statement will be prepared on a particular project" is filed with "a local newspaper which has adequate circulation to cover the area that will be affected by the project."⁴⁹ Such advance notice serves to generate public input into the preparation of the draft EIS, but it also serves to identify members of the public who should receive a copy of the draft statement once it is completed.

The EPA regulation provides that interested persons shall receive a copy of the draft statement.⁵⁰ Announcements in local media of the availability of the draft statement indicate where copies may be obtained.⁵¹ The final statement is distributed to "only those who responded to the draft statement."⁵² The latter procedure is in keeping with the latest CEQ guidelines, which also provide that:

...Materials to be made available to the public shall be provided without charge to the extent practicable, or at a fee which is not more than the actual cost of reproducing copies required to be sent to other Federal agencies, including the Council. 53

⁴⁸Ibid., Section 6.22(b)(2)(ii).

⁴⁹Ibid., Section 6.22(b)(3).

⁵⁰Ibid., Section 6.23(b)(2)(iv)(e).

⁵¹Ibid., Section 6.23(b)(2)(v).

⁵²Ibid., Section 6.24(b).

⁵³CEQ, "Guidelines," Section 1500.9(d).

6.3.2.8 Timely Public Announcement of Plans.

A hallmark of the development and implementation of NEPA has been its emphasis on increasing public involvement in the planning processes of Federal agencies. Advocates of such citizen participation claim that the democratic process is strengthened by allowing greater local access to Federal administrators. Such a view is endorsed by the supporters of NEPA and the CEQ, although it runs contrary to the findings of one study which indicated that such participation involves commitments by individual agencies to the views of various participatory boards or units which lead to interagency conflicts.⁵⁴

The discussion in the preceding section outlines the rather detailed procedures which EPA has developed for ensuring timely public notice of its plans and programs with environmental impact. In light of the details presented there, it is unnecessary to elaborate further here. As noted, in Section 6.3.2.5 above, its procedures on this element of the EIS process are in full compliance with the latest CEQ guidelines.

6.3.2.9 Summary of Analysis of EPA's Regulation for Impact Statement Preparation.

This analysis of the EPA regulation indicates that the agency has essentially conformed

⁵⁴Stephen A. Fraser, "Citizen Participation in Decision-Making by Federal Agencies: Selective Service System, Bureau of Land Management, Office of Economic Opportunity, Department of Housing and Urban Development," (Ph.D., diss., The Johns Hopkins University, 1969).

to the general requirements which should be contained in an agency's NEPA regulations as outlined in Section 6.3.1.2 above.

Several areas requiring revision as a result of the new CEQ guidelines were identified. On the whole, however, it is concluded that the regulations represent a substantial achievement in meeting the spirit and letter of NEPA and CEQ requirements. As in the general case of other agencies, however, the EPA regulations do not contain explicit "monitoring" procedures along the lines discussed in Section 5.6 of Chapter Five of this study. Despite the latter "shortcoming," it is a basic view of this study that the EPA regulations serve as an excellent model of a NEPA directive at the agency level.

6.3.3 EPA Review of Other Agency Actions. As noted in Section 6.3 above, "because of its authority and expertise in the six primary areas of pollution control..., EPA reviews virtually every impact statement that is filed."⁵⁵ This involvement in other agency actions comes about as a result of NEPA's requirement that agencies, in connection with their EIS activities, shall:

...consult with and obtain the comments of any Federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved. ⁵⁶

Additional statutory review authority is provided in Section 309 of the Clean Air Act, as amended, which provides that the Administrator of EPA shall comment in writing on the environmental impact of any matter relating to his duties and responsibilities, and shall refer to the Council on Environmental Quality any matter that he determines is unsatisfactory from the standpoint of health or welfare or environmental quality.⁵⁷ This means that:

...wherever an agency action related to air or water quality, noise abatement and control, pesticide regulation, solid waste disposal, generally applicable environmental radiation criteria and standards, or other provision of the authority of the Administrator is involved, Federal agencies are required to submit such proposed actions and their environmental impact statements, if such have been prepared, to the Administrator for review and comment in writing. ⁵⁸

⁵⁵EPA, EPA: A Progress Report, p. 111.

⁵⁶NEPA, Section 102(2)(C).

⁵⁷The Clean Air Act, Section 309. See 42 U.S.C., Section 1857h-7 and CEQ, "Guidelines," August 1, 1973, Section 1500.9(b).

⁵⁸CEQ, "Guidelines," August 1, 1973, Section 1500.9(b).

In the light of such extensive statutory authority, EPA has established detailed instructions for carrying out its environmental review responsibilities. A separate manual has been prepared which "establishes policies, procedures, and responsibilities for the Agency's review of Federal actions impacting the environment..."⁵⁹ The manual deals with review functions arising from both NEPA and the Clean Air Act. Although it is beyond the scope of this study to go into the details of these agency instructions, it is appropriate to comment on the general nature of the EIS review process involved.

The manual assigns responsibility to a "principal reviewer" to review impact statements and prepare Section 309 comments. The office designated as a "principal reviewer" has certain specific duties with regard to analyzing the environmental impact statement or Section 309 action, preparing the EPA comments, initiating press releases and other public notifications, providing technical assistance to the originating agency regarding requirements of NEPA, and following up on Agency comments, under certain limited conditions, on draft impact statements "to assure that the Agency's comments are adequately considered by the originating Federal agency."⁶⁰

⁵⁹U.S. Environmental Protection Agency, "Procedures Manual for Review of Federal Actions Impacting the Environment," Order No. 1640.1, November 30, 1972.

⁶⁰Ibid., Chapter 1, Section 4.b.

Procedures for designating "principal reviewers" are spelled out in the manual, but generally the review function is carried out at the regional office level. Various administrative controls to ensure timely review and internal coordination of EPA policy positions are provided for in the manual as is a system for rating both the proposed project and the originating agency's impact statement.

Although Figure 6-2 deals with procedures followed in EPA's Region X Office, it illustrates the typical internal review process which is carried out at the regional level.

The rating system employed by the agency is presented in Table 6-1, which applies to the project and the EIS document itself. No rating of the proposed action is made if the EIS is assigned a Category 3 rating because a basis does not generally exist on which to make a determination about the environmental impact of the proposed project. All "3" and "EU" ratings on draft impact statements must be cleared at the EPA Headquarters level in order "to double check that all such ratings are consistent with policies and practices followed by EPA on a nationwide scale."⁶¹ The originating agency is notified of the assigned ratings at the time a comment letter is sent. EPA also notifies the CEQ of its comments on all "3" or "EU" projects so that the Council can

⁶¹U.S. Environmental Protection Agency, Office of Federal Activities Memorandum, "EPA's Rating of Draft Impact Statements," March 2, 1973.

Figure 6-2

Procedures for Reviewing Impact Statements
Environmental Protection Agency - Region X

SOURCE: EPA, Region X,
Environmental Impact
Statement Guidelines,
rev. ed. (Seattle,
Washington, April 1973),
p. 121.

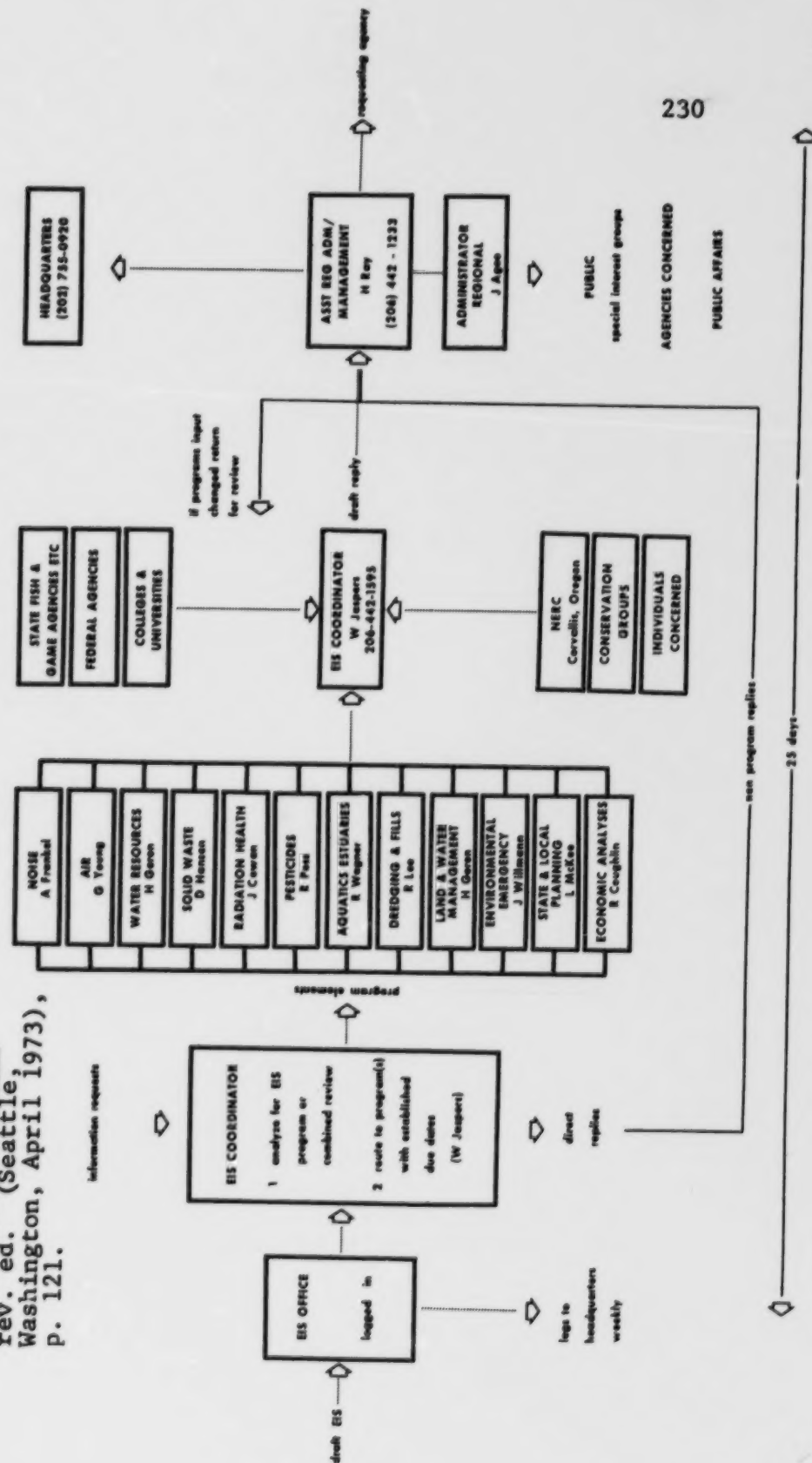


Table 6-1

EPA System of Rating Other Agency Actions

1. Project rating (LO, ER, or EU).

LO (Lack of Objections). EPA has no objections to the proposed action as described in the draft impact statement or suggests only minor changes in the proposed action.

ER (Environmental Reservations). EPA has reservations concerning the environmental effects of certain aspects of the proposed action. EPA believes that further study of suggested alternatives or modifications is required and has asked the originating Federal agency to reassess these aspects.

EU (Environmentally Unsatisfactory). EPA believes that the proposed action is unsatisfactory because of its potentially harmful effect on the environment. Furthermore, the Agency believes that the potential safeguards which might be utilized may not adequately protect the environment from hazards arising from this action. The Agency recommends that alternatives to the action be analyzed further (including the possibility of no action at all).

2. Adequacy of document (1, 2, or 3).

Category 1 (Adequate). The draft impact statement adequately sets forth the environmental impact of the proposed project or action as well as alternatives reasonably available to the project or action.

Category 2 (Insufficient Information). EPA believes that the draft impact statement does not contain sufficient information to assess fully the environmental impact of the proposed project or action. However, from the information submitted, the Agency is able to make a preliminary determination of the impact on the environment. EPA has requested that the originator provide the information that was not included in the draft statement.

Category 3 (Inadequate). EPA believes that the draft impact statement does not adequately assess the environmental impact of the proposed project or action, or that the statement inadequately analyzes reasonably available alternatives. The Agency has requested more information and analysis concerning the potential environmental hazards and has asked that substantial revision be made to the impact statement.

SOURCE: EPA, Region X, Environmental Impact Statement Guidelines, rev. ed. (Seattle, Washington, April 1973), p. 120

can begin to follow up on the project at an early stage in its development.

The manual provides that:

For each draft impact statement which was rated 2, 3, ER, or EU, the final impact statement will be reviewed by the principal reviewer to determine whether the statement substantially resolves the problems surfaced by the draft statement. Primary attention will be devoted to substantive issues related to assessing the environmental impact of the proposed project or action, as opposed to review of the adequacy of the final statement. 62

Such follow up procedures may involve further comments to the originating agency, publication of the follow up comments in the Federal Register, and further notification to the CEQ of EPA's objections. As discussed in Section 5.3.3.1 in Chapter Five of this study, the CEQ does not exercise "chain of command" authority over other agencies, but it can exert considerable influence in bringing about changes in agency proposals as a result of its policy relationship to the President.

In light of the NEPA requirement for interagency consultation and the CEQ guidelines pertaining to review of draft statements by agencies and members of the public, it may be presumed that each agency has developed some internal procedures for coping with the resultant administrative burdens. It is doubtful, however, that other agencies have developed such detailed procedures as those of the EPA.

⁶²EPA, "Manual for Review of Actions Impacting the Environment," Chapter 3, Section 4.a.

It is a recommendation of this study that other agencies review EPA's manual closely for the guidance it may provide in improving their own review functions as well as for gaining a clearer understanding of the treatment given to their EIS's while undergoing review by EPA.

The foregoing analyses of the EIS review and preparation procedures did not entail a consideration of the organizational structure or personal qualifications of the staff members engaged in the process. The following subsection presents a brief analysis of EPA's organization for NEPA programs, with attention focused at the regional office level, and presents the results of a short biographical questionnaire of regional office personnel engaged in the preparation of EIS's.

6.3.4 EIS Organization and Biographical Data. The basic organizational structure of EPA is reflected in Figure 5-3 of Chapter Five of this study. One of the five staff offices shown reporting directly to the Administrator is the Office of Federal Activities (OFA). Among the responsibilities of OFA, as outlined in EPA's Interim Regulation for Preparation of Environmental Impact Statements and in its Manual for Review of Federal Actions Impacting the Environment, are those of providing Agencywide policy guidance and internal coordination of all agency programs concerned with impact statements.

There are ten regional offices shown in Figure 5-3 and, as suggested in Section 6.3.3 above, it is at this level where the bulk of the agency's EIS activity takes place. The typical

procedure in the regions is to have the EIS preparation and review functions carried out by different members of the regional staff. The region may or may not provide for those engaged in review functions to be directly supervised by the same individual who directly supervises those engaged in EIS preparation activities. The Region IV organization chart depicted in Figure 6-3 will serve to illustrate some of the variations which have been adopted in the different regions.

The five major divisions shown in Figure 6-3 are more or less typical of the broad organizational structure in each region. The EIS preparation and review functions are carried out under the overall divisional control of the Air and Water Division (A&W) in Regions II, III, V, VII, VIII, and IX. Of these six, half have organized a staff of people to prepare EIS's and a staff of people to coordinate review into a separate EIS section or branch within the A&W Division and the other half have not integrated the two EIS functions. In the former category are Regions II, III, and VIII. Regions V and VII have their statements prepared internally by engineers of their Construction Grants branch on a "task-assignment" basis while their review functions are carried out by other members of the A&W Division in an on-going capacity. Region IX houses both functions as on-going functions within the A&W Division, but without a single direct supervisor over the two staffs, other than the A&W Division manager, of course.

The remaining four regional approaches share little in common with the previous six or with each other. Region I,

Figure 6-3



for example, has its statements prepared by an Environmental Impact Branch staff whose Chief reports directly to the Regional Administrator. Its review function, however, is carried out in the Environmental Evaluation Section of its Water Quality Branch in the A&W Division.

Region IV has a separate Environmental Impact Statement Branch whose Chief supervises both the preparation and review staffs. As Figure 6-3 shows, however, the EIS Branch is housed under Region IV's Surveillance and Analysis (S&A) Division. Such placement is unique within EPA's regional offices, as was its former placement as a separate branch reporting directly to the Regional Administrator.

In Region VI, the impact statements are prepared in the Office of Grants Coordination, while the review function is carried out by engineers in the A&W Division.

Finally, Region X has adopted a decentralized structure consisting of three State Operations Divisions in which preparation is handled on a "task-assignment" basis within each of the three Divisions. The review function is coordinated through the Management Division.

As can be seen from the preceding discussion, it is impossible to refer to a "typical" regional EIS organization. The most prevalent pattern to be observed, however, is to have both preparation and review functions housed under the A&W Division, but with no uniformity of treatment insofar as having an integrated EIS branch or section within the Division.

Perhaps the most that can be gleaned from such a review of regional approaches to coping with the EIS requirement is to note that each region seems to "play it by ear" in its region based on the skills available among the regional staff members and the level of EIS activity. However, in the light of the agency's stated goal to increase its output of EIS's and negative declarations, with the major effort taking place in connection with wastewater treatment grants programs,⁶³ it would appear that one could expect further centralization under a single Chief within the A&W Division.

With such an overview of the organizational arrangement within EPA for handling the EIS program, it is appropriate to turn attention now to the results of a biographical questionnaire administered to personnel at the regional office level who were engaged in the preparation of EIS's. The questionnaire itself is attached as Appendix H.

6.3.4.1 Biographical Survey Results. There were twenty-six respondents who had prepared or assisted in preparing at least one draft or final impact statement. The average time spent in their present position was 16.34 months as of May 25, 1973. They averaged 6.49 years of Federal service. Four of the 26 respondents (15.4%) were females.

Table 6-2 indicates the grade level of individuals involved in the preparation of EIS's. It can be seen there

⁶³See footnote 37

Table 6-2

Regional Grade Level Distribution of EPA Personnel
Engaged in EIS Preparation as of May 25, 1973

Grade Level	II	III	IV	VI	Region* VIII	X	Total
GS- 3	-	-	-	-	-	1	1
GS- 7	1	-	-	-	-	-	1
GS- 9	1	2	1	1	-	-	5
GS-11	2	-	-	-	1	-	3
GS-12	2	-	3	-	-	1	6
GS-13	-	1	5	-	1	1	8
GS-14	-	-	-	1	-	1	2
Total	6	3	9	2	2	4	26

Source: Biographical Questionnaire of EPA Regional Personnel, Appendix H.

* No impact statements were prepared in Region I and no replies were received from Regions V, VII, or IX.

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that there is a rather wide diversity among the various regions, and even within individual regions, when it comes to the skill levels which are being utilized to carry out essentially the same function. Such diversity in grade levels is readily explainable in terms of the newness of the function and the fact that so much of the work has been accomplished on a "task-assignment" basis rather than being "routinized" into the agency's organizational arrangement. From a management point of view, it would seem that the on-going requirement for EIS's and the nature of the EPA program generating the most statements represent strong reasons for the agency to consider adoption of staffing regulations which would standardize the position-description.

A wide disparity in educational backgrounds of individuals involved in preparing EIS's is indicated in Tables 6-3 and 6-4. Again the reasons for such diversity are apparent in the newness of the function and the regional approach to getting the job done with whatever skills could be tapped at the time a requirement for an EIS arose. It is recognized, of course, that some projects are more complex than others and entail particular environmental considerations. It is believed, however, that a strong case exists for attempting to standardize the position within the agency's staffing procedures. In cases where a unique environmental skill is needed to perform a particular analysis, then such skills could be drawn on, as they are now, through a "task-assignment" arrangement, but the work of preparing the statement itself

Table 6-3

Years of Formal Schooling of EPA Regional
Personnel Engaged in EIS Preparation
as of May 25, 1973

<u>Years of Formal Schooling</u>	<u>Number</u>
a. Less than 12 school years	0
b. More than 12 but less than 16 school years	1
c. More than 16 but less than 17 school years	5
d. More than 17 but less than 18 school years	10
e. More than 18 but less than 19 school years	4
f. More than 19 school years	<u>6</u>
Total	26

Table 6-4

Academic Degrees of EPA Regional Personnel
Engaged in EIS Preparation as of May 25, 1973

<u>Academic Degree</u>	<u>Number</u>
Associate of Arts	1
Bachelor of Arts:	
Field unspecified	3
Chemistry	1
Economics	1
Bachelor of Science:	
Field unspecified	3
Agronomy	1
Biology	1
Chemistry	1
Civil Engineering	14
Environmental Science	1
Mining Engineering	1
Master of Science:	
Field unspecified	3
City Planning	1
Civil Engineering	2
Engineering	1
Environmental Engineering	1
Sanitary Engineering	1
Doctorate	5

could be carried out by a full-time impact statement analyst.

Although it is difficult to assess the length of time involved in preparing EIS's because of the varying degrees of complexity or controversiality involved, it may be noted that the 26 respondents produced 31 draft statements and 21 final statements by May 25, 1973. Based on an average of 16.34 months in their present assignment, it may be calculated that 52 statements were produced in 425 man-months or an average of 8.2 months per statement.

The findings of a study by The Conference Board were noted in Section 3.2.1 of Chapter 3 in this study. It was indicated there that pollution control executives in private industry tend to have engineering degrees and that the most common field of engineering training was chemical engineering. The educational backgrounds of EIS preparers shown in Figure 6-4 show a similar concentration in engineering, but with the predominate field being in Civil Engineering. This is, no doubt, a reflection of the categorical program nature of most of EPA's EIS's being concentrated in the wastewater treatment area.

There is little else to be drawn from the biographical data obtained. The major conclusion one could justify from the data would be that there seems to be little attention given to standardizing the position of impact statement analyst. The fact that the agency has been able to utilize a variety of skills and experience levels suggests that no

single discipline, such as Engineering, is an essential background for success. Such a conclusion seems even more justified when it comes to the appropriate background of someone engaged in supervising the activities of both EIS preparers and reviewers. In such a case, one would look for administrative skills more than technical skills. Success in coordinating an EIS section or branch certainly involves more than the ability to conduct an analysis of scientific or technical data, especially in light of the fact that EIS's are to be written in such a manner as to be comprehensible to members of the interested public.

This second part of the chapter has entailed a brief examination of EPA's organizational arrangements for executing its EIS requirement, including a review of the results of a biographical questionnaire. The final section of this chapter involves the presentation of an analysis of various impact statements which were selected at random for purposes of determining the characteristics of agency responses to NEPA's requirements.

6.4 Federal Agency EIS Activity in the Southeastern United States. The purpose of this section is to present findings from an analysis of EIS activity by various agencies in the Southeastern United States. Part of the analysis is based on all draft and final impact statements that were filed with the Environmental Protection Agency for review during 1972. These statements represent the "frame" from which a proportionate sample of impact statements was drawn for further

analysis. The sampling procedures used in selecting the statements for detailed study are described in Section 4.2.1 of Chapter Four of this study. A total of 23 statements were selected out of the 109 final statements filed, which represents a 21.1% sampling ratio. The selected statements are listed in Appendix E. In addition to the statements in the sample, seven statements prepared by the Region IV office of EPA were examined. The EPA statements are also listed in Appendix E. The twenty-three statements represent projects proposed by ten different Federal agencies. All eight of the Southeastern states are represented in the sample.

This section includes analyses of the sources of impact statements within the region, characteristics of projects and statements during the draft and final impact statement stages, as well as information on the economic and human resources used in statement preparation.

6.4.1 Overall Regional EIS Activity. As indicated in Section 6.3 above, EPA reviews virtually every impact statement that is written. This fact permits easy identification of the statements prepared on agency projects in the eight states served by EPA's Region IV office. Each regional office is required by EPA regulations to maintain a log of EIS activity, so one need only consult the log to determine how many statements have been written by each agency in the region.

6.4.1.1 Monthly EIS Receipts. The monthly level of activity during the year is shown in Table 6-5. The table suggests that there is a slight cyclical pattern in the region,

Table 6-5
Monthly Receipt of Environmental Impact
Statements During Calendar Year 1972
Environmental Protection Agency
Region IV

Month	Draft EIS	Final EIS	Total
January	21	1	22
February	34	4	38
March	36	13	49
April	30	13	43
May	25	16	41
June	28	10	38
July	15	11	26
August	18	5	23
September	21	8	29
October	19	11	30
November	14	10	24
December	25	7	32
Totals	286	109	395

Source: EIS Log, Environmental Protection Agency, Region IV.

with a higher level of activity in the spring months prior to the end of the fiscal year and a drop off in activity during the summer months in the early part of the following fiscal year. Such a seasonal characteristic may facilitate vacation and training scheduling of EPA personnel engaged in EIS activities.

6.4.1.2 Sources of Statements and Project Locations.

An analysis of the distribution of draft impact statements by originating agency and state in which the project is located is summarized in Table 6-6. A similar analysis is summarized in Table 6-7.

When the total production of EIS's during the year is considered, it becomes apparent that there is a high concentration of EIS activity in Florida and North Carolina. Such an imbalance in the proportion of total statements in two of the eight states in the region may suggest an inequitable distribution of Federal funds on projects within the region. It probably, however, reflects a more active conservation or environmentalist-oriented citizenry in those two states, whose potential for controversy encourages an agency to develop impact statements where it might otherwise "settle for" a negative declaration. This is considered especially so in the case of Florida, where there are many retirees of influence or wealth who take an active interest in proposals affecting their local surroundings.

As for the distribution of statements by agency, a comparison of the regional distribution of statements with

Table 6-6
Distribution of Draft Impact Statements During Calendar
Year 1972 by Originating Agency and Project Locale

Agency	State									
	Ala	Fla	Ga	Ky	Miss	NC	SC	Tenn	Multi*	Total
Dept. of Transportation	10	35	9	19	-	26	14	15	-	128
Fed. Highway Admin.	1	2	8	1	4	4	2	1	-	23
Fed. Aviation Admin.	-	2	1	-	-	2	2	-	1	8
Coast Guard	-	-	-	-	-	-	-	-	1	1
Other	4	13	6	8	8	6	-	2	3	50
Dept. of Defense	-	3	-	-	1	3	1	-	1	9
Corps of Engineers	-	-	4	1	2	1	1	2	-	11
Other	-	1	-	-	-	1	-	1	-	3
Dept. of Agriculture	-	-	-	1	-	1	1	-	-	3
Soil Conservation Svc.	-	1	-	-	-	1	1	-	2	3
Forest Svc.	-	-	-	-	-	-	-	-	-	3
Rural Elec. Admin.	-	1	-	-	-	-	-	-	-	3
Other	-	-	-	-	-	-	-	-	-	-
Dept. of the Interior	-	1	1	-	-	-	-	1	-	3
National Park Svc.	-	2	3	-	-	1	1	-	2	9
Other	-	-	-	-	1	-	-	-	-	1
Dept. of Health, Educ. & Wel.	-	-	-	-	-	-	1	-	-	3
Dept. of Housing & Urb. Dev.	-	-	-	-	-	-	-	-	-	3
Atomic Energy Commission	1	3	1	-	-	2	4	1	1	12
Federal Power Commission	4	-	4	-	-	2	2	-	1	13
Nat'l Aero. & Space Admin.	-	1	-	-	-	-	-	-	-	1
Tennessee Valley Authority	2	-	-	-	-	-	-	1	1	4
Veterans Administration	-	-	-	-	-	-	1	-	-	1
Totals	22	64	38	30	16	49	30	24	13	286

Source: EIS Log, Environmental Protection Agency, Region IV.

* Project involves more than one state

Table 6-7

Distribution of Final Impact Statements During Calendar
Year 1972 by Originating Agency and Project Locale

Agency	State									
	Ala	Fla	Ga	Ky	Miss	NC	SC	Tenn	Multi*	Total
Dept. of Transportation										
Fed. Highway Admin.	16	1	3	2	-	3	4	4	-	33
Fed. Aviation Admin.	-	1	8	1	3	3	2	-	-	18
Coast Guard	-	-	-	-	-	-	1	-	-	1
Other	-	-	-	-	-	-	-	-	-	-
Dept. of Defense										
Corps of Engineers	3	6	-	3	1	1	2	1	2	19
Other	-	2	-	1	-	-	-	-	1	4
Dept. of Agriculture										
Soil Conservation Svc.	-	-	-	-	-	2	4	-	-	6
Forest Svc.	-	1	-	-	-	-	-	-	-	1
Rural Elec. Admin.	-	-	-	1	-	1	1	-	-	3
Other	-	-	-	-	-	-	-	-	-	-
Dept. of the Interior										
National Park Svc.	-	-	-	-	-	-	-	-	-	-
Other	-	-	3	-	-	-	-	-	-	3
Dept. of Health, Educ. & Wel.										
Dept. of Housing & Urb. Dev.	-	-	1	-	-	1	1	-	-	3
Atomic Energy Commission	1	1	1	-	-	1	2	-	-	6
Federal Power Commission	-	-	-	-	-	-	-	-	1	1
Nat'l Aero. & Space Admin.	-	-	-	-	-	-	-	-	-	-
Tennessee Valley Authority	2	-	-	-	1	-	-	6	1	10
Veterans Administration	-	-	-	-	-	-	1	-	-	1
Totals	22	12	16	8	5	12	18	11	5	109

Source: EIS Log, Environmental Protection Agency, Region IV.
* Project involves more than one state.

the national sources of statements by agency reveals a similar pattern of activity between the Southeastern states and the nation as a whole. As may be seen in Table 6-8, the overwhelming percentage of statements are produced, both nationally and regionally, by the Department of Transportation and the Corps of Engineers. Such an imbalance in agency effort has been the subject of CEQ concern since the beginning of the NEPA requirement, and it has indicated that it will undertake a review of agency performance based on the agencies' response to the latest guidelines.

The Council remains concerned about the uneven performance of agencies in filing impact statements....(M)ost statements are still filed by two agencies. Few of the total number of statements, covering thousands of Federal actions taken each year, involve neither highways, airports, or Corps projects. Uniform standards for when agencies will or will not prepare statements would be impossible to devise in view of the tremendous diversity of agencies and programs. However, the data...suggest that the divergencies among agencies' filing patterns are unjustifiably wide. The Council will focus on this problem when it reviews agency revisions of NEPA procedures pursuant to its...revised impact statement guidelines. ⁶⁴

The nature of the agency mission, of course, determines the types of actions it undertakes. The types of actions undertaken within the region are analyzed in the following subsection.

6.4.1.3 Types of Agency Actions. Regional EIS activity provides a basis for classifying the types of actions undertaken by the various agencies. The CEQ has developed

⁶⁴CEQ, Fourth Annual Report, p. 245.

Table 6-8

Comparison of Regional and National Distribution of Environmental
Impact Statements by Agency During Calendar Year 1972 *

Agency	National		Regional	
	No. of EIS's	% of Total	No. of EIS's	% of Total
Department of Transportation	674	49.2%	212	53.7%
Department of Defense #	24	1.8%	13	3.3%
Corps of Engineers	211	15.4%	69	17.4%
Department of Agriculture	124	9.0%	30	7.6%
Department of the Interior	107	7.8%	15	3.8%
Dept. of Housing and Urban Devel.	26	1.9%	6	1.5%
Atomic Energy Commission	65	4.7%	18	4.6%
Federal Power Commission	65	4.7%	14	3.5%
All Other Agencies Combined	79	5.5%	18	4.6%
Totals	1,371	100.0%	395	100.0%

Source: EIS Log, Environmental Protection Agency, Region IV and Council on Environmental Quality, Fourth Annual Report, September 1973, p. 244.

* Includes all final statements and draft statements on actions for which a final was not filed.

Excluding Corps of Engineers.

a classification system which may usefully be adapted for purposes of comparing the types of regional actions with the types of national actions.⁶⁵ The types of Federal actions involving EIS's are shown in Table 6-9, which compares regional activity to national performance. Clearly, there is a direct reflection of the level of activity by the Department of Transportation in connection with Road and Airport projects, while the activities of the Corps of Engineers are concentrated in Watershed Protection and Flood Control projects as well as in Navigation projects. This analysis simply highlights the fact that most EIS's are prepared by two major agencies.

This overview of the total EIS activity in the region provides a basic foundation for the next phase of the analysis, which is based on the detailed study of the sample of impact statements and the statements prepared by EPA's Region IV staff.

6.4.2 Characteristics of Projects. This portion of the analysis is concerned with the nature of projects which were subjected to the EIS process. It does not consider the multitude of agency projects which were initiated after an environmental analysis resulted in a negative declaration. The

⁶⁵Ibid. See also CEQ, Third Annual Report, p. 249. The adaptation consists of combining "Forestry" projects with "All Others," resulting in eight categories rather than the nine different types of actions classified by the CEQ.

Table 6-9
Comparison of Types of Federal Actions at National and Southeastern
Regional Levels During Calendar Year 1972 *

Type of Federal Action	National		Southeast Region	
	No. of EIS's	% of Total	No. of EIS's	% of Total
Roads	543	39.6%	162	41.0%
Watershed Protection and Flood Control	127	9.3%	29	7.3%
Airports	119	8.7%	43	10.9%
Navigation	83	6.1%	21	5.3%
Electric Power	128	9.3%	39	9.9%
Parks, Wildlife Refuges, and Recreational Facilities	84	6.1%	20	5.1%
Pesticides and Herbicides	26	1.9%	7	1.8%
All Others	261	19.0%	74	18.7%
Totals	1,371	100.0%	395	100.0%

Source: EIS Log, Environmental Protection Agency, Region IV and Council on Environmental Quality, Fourth Annual Report, September 1973, p. 243.

* Includes all final statements and draft statements on actions for which a final was not filed.

analysis here is concerned with the costs of the projects, the state of project development in which the EIS was initiated, and EPA's rating of the project under its rating system.

6.4.2.1 Estimated Costs of Completed Projects.

Eight of the 23 sample projects (34.8%) did not include data on the estimated cost of the project at either the draft EIS stage or final EIS stage. Three included benefit-cost data, but only in terms of the benefit-cost ratio or on portions of the project. Only twelve (52.2%) cited specific project cost information, of which five included information based on a benefit-cost analysis. This sample performance is in contrast to the fact that every one of the project statements prepared by EPA's Region IV included information on the project's cost.

Information on economic aspects of a proposal is an important factor to be weighed in determining whether or not a proposal should be adopted. The latest CEQ guidelines require that EIS's include:

An indication of what other interests and considerations of Federal policy are thought to offset the adverse environmental effects of the proposed action....In this connection, agencies that prepare cost-benefit analyses of proposed actions should attach such analyses, or summaries thereof, to the environmental impact statement, and should clearly indicate the extent to which environmental costs have not been reflected in such analyses. 66

⁶⁶CEQ, "Guidelines," August 1, 1973, Section 1500.8(a)(8).

Based on these findings concerning agency practice in citing project costs and a belief that such information is of interest to any reviewer of an EIS, it is recommended that all agencies adopt the practice followed by EPA's Region IV staff of making such information available in all their EIS's. It is further recommended that any summary reference to a cost-benefit analysis show more than a simple benefit-cost ratio figure.

The estimated costs of the twelve sample projects which cited a specific cost figure are shown in Table 6-10. It is observed that changes in the cost of the project occurred between the draft EIS and final EIS stage in only two instances. In neither of these two cases, however, was there any indication that the cost increases were attributed to changes in the project arising from environmental considerations. Likewise, there were no cost changes shown in the EPA statements either. This suggests that agencies are not reviewing the project proposal in the light of any additional features which must be added as a result of the review process, that agencies are not incorporating suggested changes into their final plans, or that the original cost estimates were sufficiently "padded" to accommodate contingency changes. The former situation is the more likely, although it should be noted that EPA's Region IV staff handles this issue nicely by presenting the estimated costs of each of the several alternative project actions it considers in a given project.

Table 6-10
Estimated Project Costs at
Draft and Final EIS Stages

EIS No. *	Draft EIS Stage	Final EIS Stage
1.	\$ 1,041,500	same
3.	35,448,000	-do-
5.	448,900	-do-
6.	1,778,000	-do-
7.	37,500,000	-do-
10.	289,600	-do-
12.	1,267,800	-do-
17.	4,627,615	-do-
18.	6,596,900	-do-
21.	12,000,000	\$14,000,000
22.	2,565,000	2,700,000
23.	N/A	\$610,000,000

* For detailed identification of EIS see Appendix E.

6.4.2.2 Stage of Project Development. In order to realize the fullest possible consideration of environmental values, it is necessary that agencies make their decision to prepare an EIS at an early stage in the project's development. The stage of project development in which agencies in the Southeastern states, including EPA, initiated their draft EIS is indicated in Table 6-11.

Table 6-11

Stage of Project Development at Which Agencies
Initiated Draft Environmental Impact Statements

Stage of Development	No. of Projects	% of Total
Early Planning	6	20.0%
Advanced Planning	21	70.0%
Construction Begun	2	6.7%
Substantially Completed	1	3.3%
Totals	30	100.0%

It is apparent that at the time of this study agencies were not initiating EIS preparation at an early stage in their decision making process. This is largely explained by the fact that most Federal actions of any significance do involve rather long lead times. Accordingly, many of these projects were initially planned prior to the enactment of NEPA or before the full weight of court enforcement of its provisions caused agencies to decide to prepare impact statements. Nevertheless, the data suggest the need for agencies to reexamine their NEPA procedures to ensure that provisions have been made to make an early decision on whether or not to develop an EIS in a given action.

6.4.2.3 Project Ratings. As discussed in Section 6.3.3 above, EPA employs a system for rating other agency projects in terms of the impact of the project on the environment. That rating system was not adopted until almost the end of the year which this study covers. Nevertheless, each of the projects drawn in the sample were evaluated in terms of EPA's criteria. The criteria themselves are shown in Table 6-1.

As the results in Table 6-12 make clear, EPA generally does not indicate serious objection to other agencies' proposed actions. Those rated "ER" at the draft stage were evaluated "LO" at the final stage, with the exception of two nuclear power-generating plants. One project was not rated because the impact statement was rated Category 3, which means that EPA had no basis on which to make a determination about the environmental impact of the proposed action. The action in question was an annual multi-state pesticide program for dealing with the Gypsy Moth infestations.

The general nature of EPA's comments on other agency projects is discussed in Section 6.4.3.6 below, so no further analysis of its objections to projects is included here. It should be noted, however, that the projects in which EPA expressed reservations were generally large-scale projects which usually involved significant impacts on water resources in the Southeast.

Table 6-12
EPA Rating of Other Agency Projects

Project Rating	No. of Projects *	% of Total **
LO (Lack of Objections)	15	65.2%
ER (Environmental Reservations)	7	30.4%
EU (Environmentally Unsatisfactory)	0	0.0%
Totals	22	95.6%

* One of the 23 projects in the sample was not rated because it received a Category 3 rating on its EIS.

** Total does not add to 100 percent because percentage is calculated on the total sample of 23 projects.

6.4.3 Characteristics of Impact Statements. This subsection presents findings regarding the impact statements themselves. The discussion includes information about the distribution lags in submitting EIS's for review and about the length of the statements. Data on the adequacy of the statements under EPA's rating system and on agency practices with regard to public participation in the EIS process are presented. An analysis of agency use of consultants in EIS preparation is included and the subsection concludes with an analysis of agency practices in obtaining the views of other agencies.

6.4.3.1 Distribution Times from Agency to EPA.

During the time covered by this study, agencies were required to allow 30 days for interested parties to comment on an EIS. The latest CEQ guidelines increased that time to 45 days, calculated from the date of publication in the Federal Register of the Council's listing notifying the public of issuance of the impact statement.

Regardless of the allowable time, if an agency's procedures do not provide for timely distribution of its statements, much of the review time may be lost in the physical distribution process. An analysis was made of the time between the date of the EIS and its receipt by EPA for comment involving all 395 statements prepared in the region during 1972. The distribution times for those agencies producing ten or more statements during the year and the times of all agencies combined are shown in Table 6-13.

An average elapsed time for all agencies of more than six days indicates that up to 20% of the time available under the former guidelines was lost in the distribution process. Even under the current guidelines it represents 14.8% of the 45 days allowed if the statement is not distributed until the CEQ's public notice appears in the Federal Register. It is recommended that agencies adopt standard distribution policies which would provide for distribution to other agencies for commenting at the same time the EIS is sent to the CEQ.

The fact that distribution of the final statement takes more than 18 days is of some concern in light of the fact that

Table 6-13

Average Elapsed Days for EPA to Receive EIS for Comment from Agencies
Producing Ten or More Environmental Impact Statements *

Agency	Elapsed Days				Combined DEIS & FEIS			
	Draft EIS		Final EIS		Final EIS		Combined DEIS & FEIS	
	$\bar{X}$	Std. Dev.	$\bar{X}$	Std. Dev.	$\bar{X}$	Std. Dev.	$\bar{X}$	Std. Dev.
Corps of Engineers	5.52	(4.11)	25.05	(20.99)	10.89	(14.48)		
Soil Conservation Service	10.73	(19.49)	14.67	(7.82)	12.12	(15.77)		
Atomic Energy Commission	6.33	(6.17)	12.33	(10.27)	8.33	(8.28)		
Federal Power Commission	7.46	(4.94)	11.00**	-	7.71	(4.85)		
Tennessee Valley Authority	6.75	(5.32)	15.78	(13.27)	13.00	(11.97)		
Federal Aviation Administration	3.48	(5.60)	6.39	(3.96)	4.76	(5.16)		
Federal Highway Administration								
Alabama	5.30	(2.72)	17.81	(15.38)	13.00	(13.62)		
Florida	2.40	(2.14)	4.00**	-	2.44	(2.16)		
Georgia	3.00	(1.87)	20.33	(20.98)	7.33	(12.99)		
Kentucky	9.47	(9.34)	9.50	(0.50)	9.47	(8.65)		
North Carolina	5.36	(3.26)	55.33	(58.82)	7.14	(7.37)		
South Carolina	6.36	(2.38)	9.25	(7.46)	7.00	(4.27)		
Tennessee	7.60	(7.14)	9.00	(6.16)	7.37	(6.75)		
All Agencies Combined	6.67	(7.14)	18.88	(24.59)	10.03	(16.07)		

* Time calculated from date of EIS. Assumes middle of month in cases where only month is given as date of publication.

**Only one EIS.

agencies need only wait 30 days following issuance of a final statement before taking administrative action on the proposed project. This suggests a need for the CEQ guidelines to be amended to establish the Federal Register announcement as the base date for calculating the waiting period in the case of final statements as well as draft EIS's.

6.4.3.2 Length of EIS. An analysis of the length of draft and final impact statements was made. For purposes of uniformity in measurement, appendix material was not included in the length determinations. Table 6-14 presents a comparison of the length of the statements drawn in the sample with those prepared by EPA's Region IV staff. The table also shows the changes in length from draft to final statement. In virtually every case the change in length is related to the originating agency's response to comments

Table 6-14

Length Comparisons of EPA Impact Statements with Statements Prepared by Other Agencies in the Southeast

Agency	Average Length of DEIS	Average Length of FEIS	Average Increase
EPA, Region IV (N=7)	93.6 (53.1)*	134.6 (90.6)	41.0 (44.4)
Other Agencies (N=23)	34.0 (57.5)	45.7 (70.1)	11.7 (18.1)

* Figures in parentheses are standard deviations.

from other agencies and members of the public. In two instances, however, the final impact statement was shorter than the draft because the final simply consisted of references to the draft and the agency's responses to reviewers comments.

The frequency distribution of EIS lengths shown in Table 6-15 tend to reveal even more sharply the differences between EPA and the other agencies. There it is clear that EPA's statements are substantially longer than most of the other agencies's statements while the same holds true for the increases in length from draft to final which, as noted above, are attributable to agency response to comments.

These findings indicate that EPA appears to devote more detailed attention to its impact statements than the other agencies in the region taken as a whole. This view is even more strongly supported when one takes into account the fact that the figures for the rest of the region include two lengthy EIS's involved with nuclear power-generating plants. The data also suggest that EPA is more detailed in its response to reviewers comments than other agencies in the region. Such findings highlight the desirability of having agencies provide more information about the impact of their proposals as well as devote more attention to suggestions from other agencies and the public.

6.4.3.3 Adequacy of Draft EIS's. As in the case of project ratings discussed in Section 6.4.2.3 above, EPA's rating system was applied to the draft EIS's drawn in the sample. The EIS evaluation criteria are shown in Table 6-1.

Table 6-15

Frequency Distribution Comparison of Length of EPA
Impact Statements with Statements Prepared by
Other Agencies in the Southeast

Length	EPA			Other Agencies		
	Draft	Final	Change	Draft	Final	Change
-12 - -1 pages	-	-	-	-	-	2
1 - 5 pages	-	-	-	4	1	13
6 - 10 pages	-	-	-	6	4	3
11 - 20 pages	1	-	3	5	8	2
21 - 30 pages	-	-	1	2	3	1
31 - 40 pages	1	-	2	2	1	1
41 - 50 pages	-	1	-	1	1	2
51 - 100 pages	2	1	-	1	2	1
101 - 150 pages	2	4	-	1	1	-
150 - 200 pages	1	-	1	-	1	-
More than 250	-	1	-	1	1	-
Total Statements	7	7	7	23	23	23

The analysis of draft impact statement ratings is summarized in Table 6-16 below.

In only 27.3% of the cases do the initial efforts of the agencies in the region achieve the environmental impact assessment goal of adequately setting "forth the environmental impact of the proposed project or action as

Table 6-16

EPA Rating of Adequacy of Other Agency
Draft Environmental Impact Statements

EIS Rating Category	No. of Statements *	% of Total
1 - Adequate	6	27.3%
2 - Insufficient Information	15	68.2%
3 - Inadequate	1	4.5%
Totals	22*	100.0%

* EPA did not receive the draft EIS for comment on one of 23 projects drawn in the sample.

well as alternatives reasonably available to the project or action."⁶⁶ In the large majority of the cases (68.2%), EPA "believes that the draft impact statement does not contain sufficient information to assess fully the environmental impact of the proposed project or action."⁶⁷ In such cases, however, "from the information submitted, the Agency is able to make a preliminary determination of the impact on the environment."⁶⁸ Whenever an EIS receives a Category 2 rating, EPA requests the originating agency to

⁶⁶EPA, "Manual for Review of Action Impacting the Environment," p. 9. See also Table 6-1 in this study.

⁶⁷Ibid.

⁶⁸Ibid.

provide the additional information in the final statement.

The one statement which was rated Category 3 was a multi-state pesticide project involving wide-spread spraying to control the Gypsy Moth. The six projects whose impact statements were considered adequate generally involved small scale projects whose impact was relatively minor. The fifteen projects whose EIS's were rated Category 2 (Insufficient Information) were, for the most part, fairly sizable projects with obvious environmental hazards.

The types of deficiencies identified by EPA in the less than adequate statements involving non-nuclear projects are categorized in Table 6-17. The two nuclear projects drawn in the sample shared common concerns by EPA about the thermal and radiological effects of the projects, including the impacts of potential accidents.

The only one of the less than adequate EIS's not cited for insufficient treatment of the solid waste disposal issues arising from the project was the Gypsy Moth pesticide project. The findings reported in Table 6-17 provide an agency with a "check-list" of things to ensure have been considered before submitting its EIS to EPA for review. Most of these items should be dealt with in the normal course of satisfying the NEPA requirement for a "detailed" assessment of the environmental impact of a proposed action, yet there is a significantly high frequency of occurrence of several of the deficiencies identified by EPA in its review of other agency statements.

Table 6-17

Recurrent Areas of EPA Concern in Other
Agency EIS's Rated Less Than Adequate
Involving Projects Other than Nuclear Power Plants

Item	Frequency of Occurrence (N=14)
Need for more attention to solid waste disposal or management plans.	92.8%
Need to consider additional alternatives and their environmental impact.	50.0%
Need to consider economic as well as environmental effects of increased population or tourism, particularly on solid waste collection and disposal facilities, on water quality, and on air quality.	50.0%
Need to specify that vegetation from land clearing and construction waste materials will be disposed of in compliance with applicable state air pollution control regulations when open burning is involved.	50.0%
Need for improvements in cost-benefit analysis information.	35.7%
Need to specify that adequate wastewater treatment facilities and erosion control measures will be provided.	28.6%
Need for additional consideration on controlling nutrient loading to avoid water quality problems.	21.4%
Need to specify noise abatement procedures during project operation and during land clearing and construction phases, including noise generated by construction equipment.	21.4%
Need to more adequately assess the impact of the proposed project on the aesthetics of the area.	14.3%
Need for more attention to the effects of dredging operations on water quality.	14.3%

The validity of the findings presented in this section is reinforced by the findings of a study carried out by the General Accounting Office (GAO) encompassing six EIS's.⁶⁹ The GAO study did not involve projects in the Southeast, but it found that the EIS's it reviewed were impaired in their planning and decision making usefulness by the following common problems:

- Inadequate discussion of, and support for, the identified environmental impacts.
- Inadequate treatment of reviewing agencies' comments on environmental impacts.
- Inadequate consideration of alternatives and their environmental impacts.

The first and last of these GAO findings match very closely the findings of this study, particularly agency failure to deal effectively with alternatives to the proposed action. This study was concerned with EPA's review of other agency comments so it is not possible to generalize on the other issue contained in the GAO report. It is appropriate to note, however, that insofar as the other agencies' treatment of EPA's comments in the final EIS, it was observed that, although not always in full agreement with the views expressed by EPA, every agency did respond to its comments in the final impact statement.

⁶⁹Comptroller General of the United States, Report to the Subcommittee on Fisheries and Wildlife Conservation, Committee on Merchant Marine and Fisheries, House of Representatives, "Adequacy of Selected Environmental Impact Statements Prepared Under the National Environmental Policy Act of 1969," (Washington, D. C., November 27, 1972).

The findings presented in this section of the study explicitly identify areas needing improvement in agency impact statements. The statements analyzed were completed at the final EIS stage during 1972, although some were initially completed at the draft stage in 1971. For all practical purposes, therefore, there is little overlap in the time periods of these statements and a related study by Andrews.⁷⁰ Although his study only dealt with four agencies, his conclusion concerning needed improvements tend to reflect the findings here. The following subsection identifies yet another area in which improvements are necessary, that of public participation in the EIS process.

6.4.3.4 Public Involvement in the EIS Process. A primary thrust of NEPA was to increase the involvement of the public in agency decision making. The discussion of the CEQ guidelines in Section 6.2.1.4 above identifies those actions which the CEQ requires to satisfy this NEPA objective. Likewise, the discussion of EPA's procedures in Sections 6.3.2.7 and 6.3.2.8 provides useful guidance to other agencies on procedures which comply with the CEQ requirements. This section presents findings on agency practice in the Southeast with regard to making EIS's available to the public. Only seven (30.4%) of the 23 EIS's drawn in the sample made specific reference in their statements that an announcement of the

⁷⁰ Richard N. L. Andrews, "Environmental Policy and Administrative Change: The National Environmental Policy Act of 1969, 1970-1971," (Ph.D. diss., University of North Carolina at Chapel Hill, 1972).

availability of the draft had been made to the public. The other 69.6% may have done so, but one is unable to determine from the statements how such notification was delivered, if at all.

Such performance in the region is in contrast to the EPA Region IV practice of running official notices in local newspapers and distributing news releases to the general media in the area affected by the project in connection with the preparation of its EIS's. It follows similar procedures in connection with its "notice of intent" to prepare an EIS, so there is full disclosure, in the local area, beginning at an early stage in the project planning. Clearly such public notice procedures are in keeping with the spirit and letter of the CEQ guidelines.

The Rural Electrification Administration has a provision in its NEPA regulation requiring an applicant to:

...make known to the public the general nature and extent of the construction program to be financed as the result of the proposed REA loan. The notification shall include the publication of an appropriate notice in a newspaper of general circulation in the County in which the principal office of the applicant is located....It shall invite any comments with respect to the environmental aspects of the proposed construction to be submitted to the applicant within thirty (30) days of publication of the notice. 71 (emphasis added)

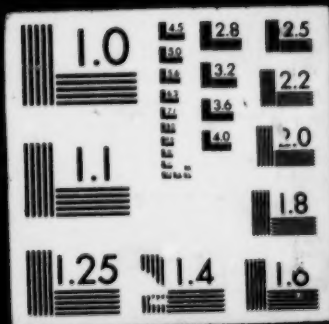
This too is in keeping with the spirit of notifying the public, but it falls short of the goal of informing those

⁷¹Rural Electrification Administration, Bulletin 20-21, June 17, 1971, Section V.C.

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in the area affected by the proposal, unless the project happens to lie in the same county where the applicant has his principal office. This point is dramatically illustrated by the REA project drawn in the sample. The applicant had filed the required notice in a general circulation newspaper in the county where it had its principal office and noted in his environmental analysis that: "No comments regarding the environmental aspects of the proposed facilities or requests for further information were received."⁷² This is not surprising in light of the fact that the newspaper is not situated in any of the seven counties affected by the project. Upon checking with the manager of the paper it was learned that the paper was not sold on the stands nor were there any mail subscriptions in the county in which the generating station, the major construction activity, was to be built.⁷³ Such a circumstance leads to the obvious recommendation that the REA amend its procedures to provide for public notice in the area or areas to be affected by the project.

Another aspect of public involvement has to do with the holding of public meetings in connection with the proposed project. Although 15 of the projects (65.2%) involved public meetings of one kind or another, in only four (17.3%)

⁷²East Kentucky Rural Electric Cooperative Corporation, Environmental Analysis, Maysville Generating Plant, p. 2.

⁷³Sherman Harris, Manager, The Winchester Sun, Winchester, Kentucky, May 21, 1973.

such cases were there indications that the EIS was a topic of discussion. Most such meetings involved Corps of Engineer and Federal Highway Administration projects in which the meeting was held to satisfy some other procedural requirement of the agency. Again the regional performance in this regard is in contrast to the EPA situation in which a public meeting is held on every draft impact statement. Not only does EPA hold such meetings on its EIS's, but it incorporates a verbatim transcript of the proceedings as appendixes in its final statement. This latter practice, while expensive and administratively cumbersome perhaps, does provide a full and complete record of the environmental considerations throughout the decision making process. This is, of course, the mandate of NEPA and it would seem that other agencies should do no less. Establishment of such a transcript requirement represents yet another possible change in the CEQ guidelines.

One final aspect of EPA's approach to encouraging public involvement deserves brief mention. Although not required by its NEPA regulation, the Region IV staff has evolved the practice of identifying in the EIS the principal staff member or members involved in its preparation. This is considered a useful way of providing members of the public with a more personalized contact with the agency on a given project and may serve to motivate individuals involved in EIS preparation to be more conscientious in their work. The procedure was observed in only one other EIS in the sample.

6.4.3.5 Use of Consultants in EIS Preparation. A thorough analysis of the 23 sample EIS's reveals minimum usage by the agencies of outside consultant services. Only two (8.7%) of the cases entailed inputs by such non-agency staff members, and even in these cases, the contribution was a relatively minor portion of the total assessment effort. Both cases involved the nuclear power-generating projects drawn in the sample. No information was available as to the amount of consulting fees involved.

This does not, however, mean that outside consultants do not provide environmental assessment services. Indeed, many of the projects undertaken by Federal agencies involve submission of environmental assessments by applicants for permits or loan or grant funds. In such instances, the applicant relies on private sources to prepare the basic assessments. This is true in such projects as private utility companies seeking FPC or AEC licensing, municipal agencies seeking wastewater treatment funding assistance, and local sponsors seeking FAA support for local airport projects. It should also be noted that the Federal Highway Administration relies on state highway departments to prepare the basic impact statements in much the same way that other agencies depend on applicants for initial environmental assessments. In the FHW case, however, the state agencies even prepare the final EIS's, but the FHW assumes responsibility for the accuracy and validity of the statements. Such a relationship

between the FHW and state agencies has been challenged in court as violating NEPA's requirement that the FHW has the obligation to carry out the environmental assessment, but the challenge failed.⁷⁴ Information on agency resources used in preparing EIS's is presented in Section 6.4.4 below.

It is difficult, of course, to obtain information on consulting fees, but some insight may be gained from information obtained on an EPA-supported water quality improvement project and reported fees in connection with airport projects.

In connection with its application for Federal funding assistance for its wastewater treatment program, Florida's Metropolitan Dade County Water and Sewer Authority had to develop an environmental assessment of its interim water quality management plan.⁷⁵ This assessment was prepared by a consortium of engineers under contract with the Water and Sewer Authority at a cost of \$50,000.⁷⁶ The report was subsequently used by the EPA staff in connection with three different impact statements on different projects in the

⁷⁴Pennsylvania Environmental Council, Inc. v. Bartlett, 315 F. Supp. 238 (M.D. Pa. 1970). Cited in Daniel R. Mandelker, Managing Our Urban Environment, 2d ed. (New York: The Bobbs-Merrill Co., 1971), p. 227.

⁷⁵Metropolitan Dade County Water and Sewer Authority, "Environmental Assessment of the Interim Water Quality Management Plan," September 1972.

⁷⁶Robert B. Steytler, Executive Director, Metropolitan Dade County Water and Sewer Authority, personal interview, January 1973.

Dade County area.⁷⁷

The FAA gathers information about project costs by sponsors in connection with its support for local airport projects. While the data on individual projects is not made available, it was reported that consultants have been charging a sponsor an average of \$1,200 to prepare a draft impact statement plus an additional \$500 for exhibits and transcripts in connection with public hearings.⁷⁸ It is impossible with the data available to make generalizations about the amount of consulting fees involved, however, it does seem appropriate to call attention to the reported cost of \$5,000 to \$10,000 for private sector EIS's in Section 5.5.3.2 of Chapter Five of this study.

A related area of investigation concerned with the use of consultants in connection with benefit-cost analyses was reported on in Section 6.4.2.1 above. There it was indicated that eight (34.8%) of the projects in the sample employed benefit-cost analysis data. In none of these cases, however, was an outside consultant used to develop the benefit-cost analysis.

This subsection has revealed that minimum use is made

⁷⁷ See EPA, Region IV, draft impact statements for South Dade County, April 13, 1973; Central Dade County, April 13, 1973; and North Dade County, April 27, 1973.

⁷⁸ Charles Blair, Planning Engineer, Southeast Regional Office, Federal Aviation Administration, personal interview, August 14, 1973.

of outside consultants by Federal agencies in the preparation of EIS's, while local agencies and private applicants seeking Federal permits or funding assistance do employ such services. Such a state of affairs is brought about because of the Federal agencies' ability to utilize data developed by the applicants as much as it is by possible apprehension by Federal officials about potential court suits under NEPA if they rely on assessments made by non-staff members.

The latter concern seems unjustified in light of the FHWA's use of statements prepared by state highway departments. Other Federal agencies could easily adopt a practice of contracting for assessment services with professionals in the field. The agency would simply have to exercise informed judgment on the statements to determine that the statement adequately reflects the requirements imposed by NEPA and the CEQ guidelines. This is little different in application than the procedures agency presently employ in reviewing other agency statements as part of the required consultation with agencies having expertise in a given area of concern.

To the extent that an outside consulting firm was not serving potential vested interests of a given agency or applicant, it can be argued that such an external assessment may provide a more objective basis for agency decision making than one prepared "in-house" by the agency staff. Such an approach to satisfying the legal requirements imposed by NEPA holds the attractive advantage of not tying up limited agency personnel resources, especially in those cases where

an agency has not received additional man-power allocations to meet NEPA-imposed work loads.

For environmental professionals contemplating market opportunities, this analysis serves to identify the current market involving local agencies and private applicants as well as outlining the general nature of an as yet "untapped" Federal agency market.

6.4.3.6 Consultation With Other Agencies. An analysis of agency practices in distributing their draft statements for comments by other agencies is summarized in Table 6-18 below.

Table 6-18

Average Number of Federal and Non-Federal
Agencies Provided Draft Impact Statements by
EPA, Region IV and Other Agencies

Source	Federal Agencies		Non-Federal Agencies	
	$\bar{X}$	Std. Dev.	$\bar{X}$	Std. Dev.
EPA, Region IV	8.00	(2.45)	12.57	(5.34)
Originators of Sample EIS's	9.08	(3.91)	8.45	(10.19)

It may be seen here that the other agencies in the region compare favorably with EPA in terms of soliciting the views of other Federal agencies in the region. EPA, on the

other hand, routinely distributes its statements to more non-Federal agencies than the other agencies in the region. Included in the non-Federal agency category are organized environmental groups, which accounts for the major difference in EPA practice and that of other agencies in the Southeast.

The 23 statements in the sample were provided to 32 different Federal agencies. This involved a total of 209 opportunities for comment, but in only 93 instances were substantive comments returned to the originating agency. This represents a reply rate of 44.5%. In other words, agencies do not have any comments to make on those statements they receive more than half the time. This is in sharp contrast to the fact that EPA's review staff had substantive comments to make on all but one of the statements it received. The types of comments made by EPA were examined in Section 6.4.3.3 above.

These findings suggest that agencies may be distributing statements to other agencies which have no jurisdiction or expertise in a given project. Although such practice may be viewed as wasteful, it is considered better to be guilty of possible administrative wastefulness than failure to inform an agency official who should have been made aware of plans affecting his area of interest.

The findings also suggest the possibility that some agencies may not be exercising detailed review of those statements provided to them. Nine of the 32 agencies

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received one or more of the 23 statements for review and did not have any comments to make, although in some cases an agency received three or four different statements.

6.4.4 Agency Resources Used in EIS Preparation. This section presents findings on cost data which could be obtained on the sample statements as well as an analysis of the educational backgrounds of personnel involved in their preparation. It must be emphasized at the outset, as the providers of the information did, that the data presented here is based on the best estimates of responsible individuals within the agencies who were personally involved in the preparation of the statements or had access to relevant information on which to make such estimates.

The virtual absence of agency procedures for keeping track of agency resources employed in the EIS process represents a finding of interest to policy makers. It would appear that agencies should actively undertake the development of internal control procedures in order to assess their own budgetary requirements in support of their EIS work loads.

6.4.4.1 Man-days of Effort Expended. The man-days devoted to draft and final impact statements is shown in Table 6-19 below. Before attempting to interpret the results, however, several points should be made about the manner of arriving at the figures.

The figures in Table 6-19 are based on all available estimates pertaining to the sample statements. In some

Table 6-19

Average Man-days of Effort on Draft and Final Environmental Impact Statements *

Type Statement	Sample Statements (N=21)	EPA, Region IV Statements (N=4)
Draft Impact Statements	263	360
Final Impact Statements	119	221
Total Man-days	382	581
Man-years (@ 260 man-days per man-year)	1.5	2.2

* Rounded to nearest whole man-day.

cases agencies reported time spent in man-years. A conversion factor of 260 man-days per man-year was applied based on 52 weeks per year and 5 man-days per week. In some cases agencies only reported total time rather than allocating time between draft and final statements. In those cases an allocation of 68.8% of the total was applied to the draft and the remaining 31.2% was applied to the final statement. This proportion was determined on the basis of the 17 statements in the sample which did reflect the split between the two statements.

The finding that EPA's Region IV staff generally devotes more time to its statements is entirely consistent with the earlier finding in Section 6.4.3.2 above, which showed that EPA's statements were longer in both the draft and final

stages. It is also consistent with the finding in Section 6.4.3.6 that EPA generally distributes its statements to more agencies for comment than the other agencies in the region.

6.4.4.2 Estimated Dollar Costs of Statements.

Agency estimates of the dollar costs for their statements are shown in Table 6-20. It is clear from the data presented there that agencies generally do not have adequate internal controls established to accumulate details on expenditures of agency resources on their EIS programs. Most agencies indicated that the work is performed on a task-assignment basis and is, therefore, not accounted for separately. It is, nevertheless, a recommendation of this study that agencies take steps to identify their EIS related costs, if for no other reason than improved budget planning.

A comparison of EPA average costs with the average costs of other agencies in the region is presented in Table 6-21. The figures there are based on averages derived from the data in Table 6-20. When the average figures for the sample EIS's are applied to the total year's production of 286 draft and 109 final impact statements, it develops that \$6.09 million dollars were spent on draft statements and \$1.06 million on final statements, for a total EIS preparation expenditure of \$7.15 million in the Southeastern states during 1972. These figures do not include expenses associated with the agency reviews of impact statements prepared by a different agency.

Table 6-20
Estimated Dollar Costs of Environmental Impact Statements

EIS No.*	Field Study		Travel Exp.		Printing		Other Costs		Total Costs		Grand Total
	Draft	Final	Draft	Final	Draft	Final	Draft	Final	Draft	Final	
1.	-	-	-	-	-	-	-	-	2500	2500	5000
2.	6500	2500	500	-	300	800	-	-	7300	3300	10600
3.	1000	-	500	-	70	100	-	-	12070	4100	16170
4.	4600	1400	500	-	300	800	-	-	5400	2200	7600
5.	-	-	-	-	-	-	-	-	4000	1000	5000
6.	-	-	-	-	4610	2090	8462	3838	30196	13694	43890
7.	1000	1000	1000	-	1000	1000	-	-	3000	2000	5000
8.	-	-	-	-	125	25	-	-	1000	600	1750
9.	-	-	-	-	125	25	-	-	1000	600	1750
10.	-	-	-	-	125	25	-	-	1000	600	1750
11.	-	-	-	-	125	25	-	-	1000	600	1750
12.	-	-	-	-	-	-	-	-	2200	1800	4000
13.	-	-	-	-	-	-	-	-	750	400	1050
14.	-	-	-	-	-	-	-	-	2000	300	2300
15.	-	-	-	-	-	-	-	-	2200	600	2800
16.	-	-	-	-	-	-	-	-	14000	6000	20000
17.	750	400	200	100	100	240	920	600	1970	1340	3310
18.	960	500	260	140	240	190	1120	560	2580	1390	3970
19.	-	-	-	-	-	-	-	-	Not Available	-	-
20.	-	-	-	-	-	-	-	-	67163	30417	97576**
21.	-	-	-	-	-	-	-	-	Not Available	-	-
22.	-	-	-	-	400	1500	-	-	13300	7350	20650**
23.	-	-	-	-	4700	6000	-	-	262700	123000	385700**
24.	-	-	-	-	-	-	-	-	Not Available	-	-
25.	-	-	1000	2000	1500	3500	7000	-	23500	48500	72000
26.	-	-	4000	2000	3000	8000	-	-	72000	30000	102000
27.	50	-	240	-	815	1130	3780	1260	12835	3715	16350
28.	-	-	-	-	1000	1355	500	-	9000	4230	13230
29.	-	-	-	-	-	-	-	-	Not Available	-	-
30.	-	-	-	-	-	-	-	-	Not Available	-	-

* For full identification of EIS see Appendix E.

**Estimated with \$75/man-day labor costs.

Table 6-21
Average Total Costs Per Impact Statement *

Type Statement	Sample Statements (N=21)	EPA, Region IV Statements (N=4)
Draft Impact Statements	\$21,300	\$29,400
Final Impact Statements	9,700	21,600
Totals	\$31,000	\$51,000

* Rounded to nearest hundred.

It is clear from the findings presented in this subsection that compliance with NEPA is costing taxpayers considerable sums of money. The question which remains unanswered, however, is whether the dollars spent have achieved sufficient improvements in environmental quality or prevented sufficient degradation to warrant the outlay of such sums.

6.4.4.3 Educational Backgrounds of EIS Personnel.

A requirement imposed by NEPA is that agencies of the Federal government shall:

...utilize a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts in planning and in decisionmaking which may have an impact on man's environment. ⁷⁹

One measure of how well agencies in the Southeast are meeting this mandate is provided in Table 6-22.

⁷⁹NEPA, Section 102(A).

Table 6-22

Disciplines Represented in
Sample Impact Statements

Position	Frequency
Agricultural Engineer	1
Agronomist (B.S. - 2)	2
Air Pollution Specialist	1
Biologist (M.S. - 3)	7
Chemist	1
Civil Engineer	14
Ecologist (M.S. - 1)	2
Economist	3
Engineering Aide	3
Engineering Technician	1
Entomologist (B.S. - 2; M.S. - 2; Ph.D -3)	7
Environmental Engineer	2
Fisheries Biologist	1
Forestry Entomologist (B.S. - 2; M.S. -5)	7
Geologist	5
Geographer	1
Health Physicist	1
Historian	1
Hydrologist	4
Landscape Architect	2
Liberal Arts	1
Limmologist (M.S. - 2)	2
Nuclear Engineer	2
Physicist	2
Radiation Chemist	2
Sanitary Engineer (B.S. - 2; M.S. - 2)	4
Sociologist	1
Transmission Engineer	1
Urban Planner	1
Zoologist	1

There was not a single project in the sample which reported less than two different disciplines, and nine (39.1%) of the projects employed four or more of these disciplines. Eight of the disciplines reflected in Table 6-4, which pertains

to EPA's EIS personnel in its ten regional offices, match with disciplines shown in Table 6-22. The weight of evidence presented here would seem to justify the conclusion that agencies in the Southeast are attempting to fulfill the NEPA requirement for an interdisciplinary approach to their decision making.

6.5 Chapter Summary. This chapter has identified the source and nature of guidance to agencies from the Council on Environmental Quality relative to agency EIS requirements, analyzed the NEPA procedures of the Environmental Protection Agency, and presented findings from an analysis of two and a half dozen impact statements prepared by eleven agencies in the Southeast, including the regional office of EPA.

The CEQ has issued instructions to agencies in the form of guidelines and instructional memoranda. The latest guidelines incorporate procedural requirements which have evolved through two previous versions and two intervening memoranda, but the basic procedures have remained essentially the same since the initial instructions were issued in April of 1970.

The basic EIS process was analyzed in terms of a four-stage process. In the first stage the agency must determine if an EIS is to be prepared or not. If so, the next stage involves the preparation of a "draft" impact statement. The third stage entails the circulation of the draft statement to other agencies and members of the public for comments, which are then incorporated into the originating agency's "final" EIS. Finally, the agency takes whatever administrative

action it decides upon based on consideration of the environmental analysis and other Federal interests.

The NEPA regulations of the Environmental Protection Agency were analyzed and found to substantially fill the requirements for such directives at the agency level. Although the need for minor revisions was noted, it was concluded that EPA's NEPA directive could serve as an excellent model for other agencies to follow.

An analysis of the review procedures employed by EPA revealed that the agency has developed a comprehensive program for meeting its statutory obligations under NEPA and Section 309 of the Clean Air Act. Detailed procedural instructions have been set forth in a manual for review of impact statements. Typical review procedures were illustrated and EPA's criteria for review of other agency actions was presented. EPA's organizational response for handling its EIS program was analyzed and revealed that a variety of regional "solutions" to the NEPA requirements have been adopted. The Agency's regional offices have utilized a variety of skill levels and disciplines in the preparation of their impact statements, and there does not seem to be any effort given to standardizing the positional requirements of impact statement analysts. ,

The analysis of Federal agency EIS activities in the Southeast indicated that EPA's Region IV staff devotes more agency effort in preparing and reviewing impact statements than other agencies in the region. The major deficiencies

of agency impact statements were identified and information about the costs of the NEPA program in the Southeast was presented. The chapter concludes with a brief analysis of the types of academic disciplines employed in the EIS programs of regional agencies. The analysis revealed that agencies appear to be complying with the NEPA mandate to utilize an interdisciplinary approach in agency decision making.

CHAPTER 7

SPECIALIZED ASPECTS OF ENVIRONMENTAL ASSESSMENTS

7.1 Introduction. This chapter deals with three aspects of contemporary research and practice which are closely related to the environmental impact statement process. First, the emerging field of Technology Assessment (TA) is examined. The concept is defined from several different perspectives. The development of the Office of Technology Assessment (OTA), as prescribed by the Technology Assessment Act of 1972 (TAA), is discussed. The relationship of TA to environmental assessments is examined through consideration of a number of examples of Technology Assessments which have already been executed.

Second, the concept of "Quality of Life" (QOL) is reviewed. The discussion identifies the nature of research efforts which have recently been undertaken to develop meaningful measurements of social indicators to be used by decision makers in programs aimed at improving our overall quality of life. It is apparent that any effort to make such measurements must give consideration to environmental issues. The purpose, then, for considering the issue here is to pinpoint the role of the EIS process in achieving such measurement capabilities.

Finally, the chapter examines the "Social Audit" (SA) concept. The background of social auditing is explored and

efforts by several firms to develop audits of their socially oriented programs is considered. The contribution of environmental assessments to such programs is analyzed.

7.2 Technology Assessment. Technology has been singled out by some critics as the major villain contributing to environmental degradation. Early among these was Rachel L. Carson, of Silent Spring fame, who attempted to show the effects of chemical poisoning of the environment by insecticides. Prominent population biologist Paul R. Ehrlich and physicist John P. Holdren note that many technological attempts to solve social problems, such as use of synthetic organic pesticides and inorganic nitrogen fertilizers to help feed the world's population, "have created vast environmental problems which seem certain to erode global productivity and ecosystem stability."²

In his book, The Closing Circle, Barry Commoner claims that technological shifts, such as phosphate detergents for soap, one-way bottles and cans for returnables, high gas-consumption autos for light-weight economy models, non-degradable plastics for paper packaging, synthetic fibers for cotton and wool, and high energy-using aluminum production for steel and lumber, "were more important than either

¹Rachel L. Carson, Silent Spring (Boston: Houghton Mifflin Company, 1962).

²Paul R. Ehrlich and John P. Holdren, "Impact of Population Growth," Science, March 26, 1971, p. 1215.

³Barry Commoner, The Closing Circle (New York: Knopf, 1971).

population or economic growth in bringing on the environmental crisis."⁴

Efforts to prevent adverse effects of technological innovation have come to be known as Technology Assessment, and it the purpose of this section to examine the process and its relevance to the environmental impact statement process.

7.2.1 Definitions. As is often the case in a new field, Technology Assessment is struggling with definitions. A number of definitions may be found in the literature, and their nature tends to reflect the perspective of the particular writer on the subject. This point was noted by Walter Hahn of the Science Policy Research Division of the Library of Congress:

If you talk to the people in the academic community...you will find that there is a high content in the definition of methodology. If you talk to people in industry or the scientists and engineers, you find that their definition tends to be lop-sided over on the technology side....

The citizens, the press, the poor affected party who has to live with the results of technology, ...sort of define technology assessment with words that have "issue" and "problem" high in the series of definitive terms.

Legislators and public and private executives usually have more of a policy connotation in their definition. ⁵

⁴"Technology Isn't the Villain - After All," Business Week, February 3, 1973, p. 38.

⁵Walter Hahn, "Congressional Actions," speech presented to Technology Assessment Symposium June 5, 1972, under joint sponsorship of the World Future Society, the Institute of Management Science, and George Washington University's Program of Policy Studies in Science and Technology.

A good working definition of TA has been developed by David M. Kiefer, Senior Editor of Chemical and Engineering News, who states: "Technology assessment is an attempt - still halting and uncertain - to establish an early-warning system to control, direct, and if necessary, restrain technological development so as to maximize the public good while minimizing the public risks."⁶ For this discussion, however, a more specific definition is required. A definitive study of the process of Technology Assessment in the Federal Government by Vary T. Coates of George Washington University's Program of Policy Studies in Science and Technology provides such a definition:

Technology Assessment is the systematic identification, analysis, and evaluation of the full range of social impacts, both beneficial and detrimental, which may result from the introduction of a new technology or changes in the application and utilization of existing technology. In technology assessment, great emphasis is placed on secondary and higher-order impacts (that is, on unplanned and unintentional consequences) which affect social, cultural, institutional, political, economic, and environmental systems and processes of society.⁷ (emphasis added)

This comprehensive definition of technology assessment establishes the scope and intent of activities aimed at assessing the impact of a technological innovation. It shows, too, that environmental considerations are taken into account in any TA endeavor.

⁶David Kiefer, "Technology Assessment," Chemical and Engineering News, October 5, 1970, p. 42.

⁷Vary T. Coates, "Technology and Public Policy: The Process of Technology Assessment in the Federal Government," (Ph.D. diss., The George Washington University, 1972).

7.2.2 Evolution of the Concept. The background of the concept has been traced by the author in two previous publications dealing with TA.⁸ The earliest use of the term "technology assessment" appears to have been in a 1966 report of the House Subcommittee on Science, Research, and Development, which was then chaired by Congressman Emilio Q. Daddario. The report proposed formation of a Technology Assessment Board, the function of which would be to keep "tab" on the effects of applied science.⁹ In 1967, Congressman Daddario, who is widely regarded as the father of TA legislation, introduced a bill to establish such a board. The board was to focus on the need for "identifying the undesirable by-products and side effects of such applied research and technology in advance of their crystalization and informing the public of their potential in order that appropriate steps be taken to eliminate or minimize them."¹⁰

Congress took no action on Daddario's proposed legislation in 1967, but the issue had been placed into the public forum

⁸Donald R. Hudson, "The Next Step Toward Social Auditing" (Paper delivered at the Annual Meeting of the Southern Management Association, Washington, D.C., November 11, 1972), pp. 1-2. See also in Donald R. Hudson, Anthony F. Jurkus, and Waino W. Suojanen, "Technology Assessment: Theory and Application," Atlanta Economic Review, March 1972, p. 28.

⁹Richard A. Carpenter, "Information for Decisions in Environmental Policy," Research Management, March 1971, p. 27.

¹⁰Keifer, "Technology Assessment," p. 45.

for consideration, and the ground work had been laid for ongoing debates. Additional hearings were held in subsequent years, and these shaped the thinking of interested participants and observers to the point that considerable agreement emerged as to the general nature of the TA function.¹¹ The Coates' definition of TA in section 7.2.1 above incorporates the ideas suggested by the hearings that TA "is a purposeful examination of the consequences of technological change which focuses on the physical, economic, social, and political effects of the application of technology...(which) goes beyond the generally familiar concept of primary cost/benefit analysis."¹²

7.2.3 The Technology Assessment Act of 1972. The chairmanship of the House Subcommittee on Science, Research, and Development was assumed by John W. Davis of Georgia's Seventh Congressional District following Congressman Daddario's departure to run for Governor of Connecticut in late 1970. On February 2, 1971, Mr. Davis introduced legislation which proposed, among other things:

To establish an Office of Technology Assessment for the Congress as an aid in the identification and consideration of existing and probable impacts of technological application.¹³

¹¹For a thorough historical treatment of the legislative developments of Technology Assessment, see Coates, "Technology and Public Policy," chapter 1.

¹²Hudson, "Technology Assessment," p. 28.

¹³The proposed legislation was referred to the Committee on Science and Astronautics on July 30th. The bill was then

Thus, Mr. Davis carried through with legislative sponsorship of earlier proposals by Congressman Daddario. The bill was eventually to become the Technology Assessment Act of 1972, and was signed into law on October 13, 1972.

7.2.3.1 Major Provisions. The major provision of the Act is the establishment of the Office of Technology Assessment (OTA), consisting of a Technology Assessment Board (hereinafter referred to as the "Board"), which has the function of formulating and promulgating the policies of the OTA, and a Director "who shall carry out such policies and administer the operations of the Office."¹⁴ The Act also provides for the OTA to establish a Technology Assessment Advisory Council, the duties of which are to advise the Board on matters undertaken by the OTA and to review and make recommendations on the findings of any assessment made by or for the Office.

7.2.3.2 Functions of OTA. The Congressional intent in establishing an Office of Technology Assessment

committed to the Committee of the Whole House on August 16, 1971, as H.R. 10243. The bill was passed, with amendments concerning the composition of the Technology Assessment Board, by the House on February 8, 1972, by a vote of 256-118. It was considered and passed, with amendments, by the Senate on September 14, 1972. The Senate agreed to the conference report on September 22, 1972, and the House agreed to the conference report on October 4, 1972.

¹⁴The Technology Assessment Act, Public Law 92-484, Sec. 3. (b).

matches closely the view held by Mr. Davis concerning how the OTA would operate. Prior to House action on his proposal, Mr. Davis noted that the OTA:

...would provide advisory services to Congress in much the same manner as...(the General Accounting Office and the Library of Congress)....The OTA would be empowered to engage firms to make studies. It would also be empowered to generate information in seeking to assess technological developments.¹⁵

The Act contains a brief statement of the function of OTA in Section 3:

(c) The basic function of the Office shall be to provide early indications of the probable beneficial and adverse impacts of the applications of technology and to develop other coordinate information which may assist the Congress.¹⁶

Within the framework of the above functional guidelines, Congress has provided for a number of activities to be carried out in support of Congressional deliberations on matters involving technological applications:

- (1) identify existing or probable impacts of technology or technological programs;
- (2) where possible, ascertain cause-and-effect relationships;
- (3) identify alternative technological methods of implementing specific programs;
- (4) identify alternative programs for achieving requisite goals;
- (5) make estimates and comparisons of the impacts of alternative methods and programs;

¹⁵Hudson, "Technology Assessment," p. 29.

¹⁶Technology Assessment Act, Section 3. (c)

- (6) present findings of completed analyses to the appropriate legislative authorities;
- (7) identify areas where additional research or data collection is required to provide adequate support for the assessments and estimates described in paragraph (1) through (5) of this subsection; and
- (8) undertake such additional associated activities as the appropriate authorities specified under subsection (d) may direct.¹⁷

It can be seen from the above that Congress is desirous of obtaining the full-range of assistance in decision making which any policy setting body needs when dealing with complex problems.

Much of the impetus for favorable action on Mr. Davis' bill came about as a result of Congressional frustration in weighing conflicting arguments during the SST debates. Many legislators complained that the arguments of proponents and opponents both were blunted because of suspicions of lack of objectivity or self-serving motives. The Congress concluded that it could no longer rely on the traditional technical advisory sources, which, for the most part, operate as arms of the Executive Branch.

The passage of the Technology Assessment Act was a clear indication of the Legislative Branch's intent to have its own technical advisory capability which would be responsible only to the Congress. The OTA, established under the Act, represents the operative mechanism for achieving the Congressional intent.

¹⁷Ibid.

This view of the independence of the OTA from the Executive Branch is further amplified by the views of Mr. Davis. When asked about the liaison between the two, Congressman Davis replied:

There would no doubt be some communication between the President's science advisor, the Office of Science and Technology (OST), and OTA personnel on a personal basis. There would certainly be members of those organizations who would be personal friends and who would exchange views, but the bill does not envision an official connection between the agencies. 18

7.2.3.3 The Technology Assessment Board. As noted in Section 7.2.3.1 above, the Board (TAB) is a major element of the OTA, along with the Director and his staff. The Act provides for the Board to be composed of equal representation from the Senate and House and for the chairmanship and vice chairmanship to alternate between the two Houses with each Congress. The membership of the Board, filling of vacancies, and the appointment of its chairman and vice chairman are provided for in the Act's Section 4 as follows:

(a) The Board shall consist of thirteen members as follows:

(1) six Members of the Senate, appointed by the President pro tempore of the Senate, three from the majority party and three from the minority party;

(2) six Members of the House of Representatives appointed by the Speaker of the House of Representatives, three from the majority party and three from the minority party; and

(3) the Director, who shall not be a voting member.

¹⁸Hudson, "Technology Assessment," p. 30.

(b) Vacancies in the membership of the Board shall not affect the power of the remaining members to execute the functions of the Board and shall be filled in the same manner as in the case of the original appointment.

(c) The Board shall select a chairman and a vice chairman from among its members at the beginning of each Congress. The vice chairman shall act in the place and stead of the chairman in the absence of the chairman. The chairmanship and the vice chairmanship shall alternate between the Senate and the House of Representatives with each Congress. The chairman during each even-numbered Congress shall be selected by the Members of the House of Representatives on the Board from among their number. The vice chairman during each Congress shall be chosen in the same manner from that House of Congress other than the House of Congress of which the chairman is a Member.¹⁹

The original Board has now been appointed.²⁰ It held its first organizing meeting on April 10, 1973, and unanimously adopted a set of 15 "Rules of Procedure." The Board's first chairman, Senator Edward M. Kennedy (D-Mass.) read the Board's rules into the Congressional Record on April 12, 1973.²¹ The rules are administrative in nature and set forth the Board's plans for handling the appointment of professional staff members, voting, record-keeping, establishment of Advisory Panels, and the appointment of consultants.

¹⁹Technology Assessment Act, Section 4.

²⁰The Board will be, in effect, a joint committee of Congress. Senate members are: Edward M. Kennedy (D-Mass.), Ernest F. Hollings (D-S.C.), Hubert H. Humphrey (D-Minn.), Clifford P. Case (R-N.J.), Peter H. Dominick (R-Colo.), and Richard S. Schweiker (R-Pa.). House members are: John W. Davis, (D-Ga.), Olin E. Teague (D-Tex.), Morris K. Udall (D-Ariz.), Charles S. Gubser (R-Calif.), James Harvey (R-Mich.), and Charles A. Mosher (R-Calif.).

²¹U.S., Congress, Senate, Congressional Record, 93d Cong., 1st sess., April 12, 1973, pp. 7350-7351.

The Board will serve to "allocate resources" among the various assessment projects undertaken. The decision as to which projects are studied will be determined by the nature of the project, according to Mr. Davis. During a personal interview with the Congressman in April 1973, he noted that:

The "idea" itself will serve as the basis for deciding, not the politics of the individual Congressman requesting that a particular study be made. ²²

As for the types of projects which the Board will tackle, it is reasonable to assume that other members of the Board share Mr. Davis' thinking on the desirability of early completion of projects which are of immediate concern to the Congress. Concerning this point, Mr. Davis said:

We will probably attack some problems initially which have a short-term payoff in order to establish the credibility of OTA in a reasonably short time. ²³

There is some indication that the OTA will turn out to be somewhat different than what some academic proponents had in mind. A staff assistant to Senator Kennedy is reported to have said:

Any material or advice we can give to Congress to help it make better decisions we will do. This is why we won't only do the precise, academic, technical analyses. That sort of thing is limited in what it can do for Congress. ²⁴

²²John W. Davis, personal interview, Marietta, Georgia, April 24, 1973.

²³Ibid.

²⁴Deborah Shapley, "Technology Assessment: Congress Develops a Hybrid," Science, March 2, 1973, p. 875.

7.2.3.4 Director of OTA. The Director and his staff represent a major element of the OTA. The Act provides for the Director to be appointed by the Board to serve for a term of six years. The Director may appoint his Deputy Director, with the approval of the Board. The Act places an employment restriction on the Deputy and the Deputy Director. This restriction is contained in Section 5 as follows:

(d) Neither the Director nor the Deputy Director shall engage in any other business, vocation, or employment than that of serving as such Director or Deputy Director, except with the approval of the Board, hold any office in, or act in any capacity for, any organization, agency, or institution with which the Office makes any contract or other arrangement under this Act. 25

Considering the nature of the Director's job, it is clear that the individual appointed will need to combine the ability to operate effectively in the arena of high-pressure politics with an ability to handle complex technical and scientific issues.

Early speculation concerning the appointee has focused on Mr. Davis' predecessor as Chairman of the House Subcommittee on Science, Research, and Development.

...The only serious candidate for director of the office is Emilio Q. Daddario, who, as a former congressman, the father of the technology assessment idea, and currently in private industry at Gulf and Western Industries, Inc., has unique qualifications for the \$40,000-per-year post. 26

²⁵Technology Assessment Act, Section 5. (d).

²⁶Shapley, "Technology Assessment," p. 875 and p. 877.

Mr. Davis appears to share the appraisal of his predecessor's qualifications. Of Mr. Daddario, Congressman Davis said: "He is able to accomodate a number of viewpoints and is intimately knowledgeable of the workings of Congress."²⁷

7.2.3.5 Technology Assessment Advisory Council. The Act also provides for the OTA to establish a Technology Assessment Advisory Council composed of twelve members as follows:

(1) ten members from the public, to be appointed by the Board, who shall be persons eminent in one or more fields of the physical, biological, or social sciences or engineering or experienced in the administration of technological activities or who may be judged qualified on the basis of contributions made to educational or public activities;

(2) the Comptroller General; and

(3) the Director of the Congressional Research Service of the Library of Congress. ²⁸

The functions of the Technology Assessment Advisory Council (TAAC), are to review and make recommendations to the Board on activities undertaken by the Board, and to review the findings of any assessment made by or for the OTA and make appropriate recommendations based on their findings.²⁹

The Council elects a Chairman and a Vice Chairman from among its members. The members themselves are appointed for a period of four years, and none can be appointed more than

²⁷John W. Davis, personal interview, Marietta, Georgia, April 24, 1973.

²⁸Technology Assessment Act, Section 7.

²⁹ibid.

twice.³⁰

7.2.4 Alternative Views. Needless to say, the approach to assessing the impacts of new technology which is envisioned by the Technology Assessment Act does not enjoy uniformly favorable support. Somewhat suprisingly, perhaps, one of the most prominent critics of technology assessment is Peter F. Drucker. Efforts by the OTA to advise the Government which new technologies to encourage and which to discourage, if not forbid altogether, can be said with certainty, according to Mr. Drucker, "to be a fiasco."³¹ In Drucker's view:

Not only is "technology assessment" of this kind impossible but also it is likely to lead to encouragement of the wrong technologies and to discouragement of the technologies we need. ³²

Drucker argues that experts have failed on numerous occasions to "predict" outcomes of newly adopted technologies, and frequently arrived at conclusions which proved contrary to actual developments. For example, he notes that the elementary public-health measure of separating latrine and well and the use of wire-mesh screen for doors and windows were the two "technologies" which led to the population explosion. He observes that neither "technology" was given much attention by the "experts." As for predicted impacts which failed to materialize, Drucker cites the fact that the private flying boom predicted at the end of World War II did not occur

³¹Peter F. Drucker, "New Technology: Predicting Its Impact Is Perilous and Futile," New York Times, April 8, 1973, Section 3, p. 1.

³²Ibid.

because there simply is not enough air space for such flying, a fact which he feels even an elementary calculation would have revealed.

He cites the ambivalence of predictions about the impact of the computer as further examples of the perils of attempting to predict the effects of new technology. First there were predictions that the computer would be used primarily in science and warfare, with no one foreseeing the applications which have developed in business and government. Next, when business began applying the computer to payroll and billings, there were dire predictions about the extinction of middle management. On the contrary, however, Drucker notes that it was then that middle management positions began to expand.

In every developed country, over the last 20 years, middle management jobs, in business as well as in government, have grown about three times as fast as total employment, And that growth has been directly correlated with the growth of computer usage. 33

After noting that technology is difficult to predict, especially in its impact, because social and economic impact is almost always the result of a number of factors which have their own origin, development, and dynamics, Drucker concludes that:

...The only thing an Office of Technology Assessment is likely to produce, therefore, would be not "phrophecies" but fifth-rate trashy fiction. 34

³³Ibid., p. 6.

³⁴Ibid.

Inability to predict the impacts of technology, however, is not considered by Drucker to be the major danger. He sees the monitoring of "young technology" as a vital task, but one which does not require prophecy.

...The major danger is that the delusion that we can foresee the impact of new technology will lead us to slight the really important task.

For technology does have impacts, and serious ones, beneficial as well as detrimental. These do not require prophecy. They require careful monitoring of the actual impact of a technology once it has become effective. 35

The Times carried two rebuttals to Drucker's arguments in a subsequent article entitled "In Defense of Technology Assessment."³⁶ The first rebuttal, by Mr. Joseph F. Coates of the Office of Exploratory Research and Problem Assessment at the National Science Foundation, challenges Drucker on the aims of TA and on grounds that Drucker ignores the fact that TA has been successfully carried out in the past.

The attempt in technology assessment is to forecast the full range of alternate environmental economic, ecological, social, political and institutional impacts and other consequences. Contrary to Mr. Drucker's view, the attempt is not to predict but rather to systematically unfold what alternative consequences might occur and from that to discern means to navigate toward the better and away from the worse. 37 (emphasis added)

³⁵ Ibid.

³⁶ "In Defense of Technology Assessment," New York Times, May 13, 1973, Section F, p. 16.

³⁷ Ibid.

Mr. Coates notes that policy makers failed to act on an accurate prediction in the late nineteen-thirties by the Department of Agriculture about the mass displacement of Southern agricultural workers to result from mechanization of cotton agriculture. He cites additional examples of technology assessments, which "usefully anticipated many impacts, consequences and alternative policy implications having to do with their respective technologies."³⁸ Among these were a 1971 study by the National Bureau of Standards on the impacts of shifting to the metric system, a 1969 study by the Department of Interior on Alaska national resources, and a National Institute of Health study of cardiac replacement. Coates concludes that:

It is disturbing that Mr. Drucker seems to feel that because something has been done badly in the past, it cannot be done well in the future. It seems much more constructive to call attention to the fact that technology assessment is being practiced and is doing the job well. ³⁹

The second challenge to Drucker's views came from Dr. Edward Wenk, Jr., who served as the first science adviser to Congress and in various science advisory posts in the Kennedy, Johnson, and Nixon Administrations. His attack is on grounds that Drucker seems ignorant of the concept of

³⁸Ibid.

³⁹Ibid.

TA and uses irrelevant arguments in criticising efforts to assess technological impacts.

Peter F. Drucker's attack on technology assessment is uninformed about the concept and thoughtless in his projection of its impotence and hazards....

Of all scholars, Mr. Drucker should recognize that technology assessment is a decision-making tool that follows well-trodden ground of market analysis in the private sector and policy research in the public....

Mr. Drucker's disdain by a recital of poor batting averages of past predictions is irrelevant. For one thing, attempts to assess technology systematically are very recent. What is more, his citations are unsupported and even irresponsible. 40

Clearly, the issue of TA is bound to stir vocal disagreements among various "experts." Supporters of the concept are found primarily among the "futurists." Among these, Alvin Toffler, author of the highly popular book Future Shock,⁴¹ rated the need for a formal structure of TA as the second most pressing problem, behind educational reform, confronting the United States in the decade of the seventies.⁴² He also expressed concern about how a proposed new technology will affect the value system of the society. The point here, however, is not to attempt to resolve the debate, but simply to pinpoint an additional area in which environmental assessments will be utilized in the future. It is a matter of

⁴⁰Ibid.

⁴¹Alvin Toffler, Future Shock (New York: Bantam Books, Inc., 1970).

⁴²Alvin Toffler, speech presented under auspices of Lyceum Lecture Series, Georgia State University, January 24, 1972.

established legislative policy that such assessments will be done in the future in those cases of Congressional interest. It is important, therefore, that the experience of Federal agencies under NEPA be recognized as a valuable source of data and methodology in future studies of technology impacts.

7.2.5 State Level Science and Technology Developments.

As in the case of other areas of public concern, the States may be expected to be active in developing public policies related to scientific and technological developments. This subsection traces some major initiatives in this area.

7.2.5.1 National Conference on Goals, Policies and Programs of Federal, State and Local Science Agencies. The National Science Foundation and the Georgia Science and Technology Commission jointly sponsored this national conference in Atlanta, Georgia, during the period October 12-14, 1970. The conference was developed in an effort to assist fledgling state and local science organizations "by providing information on science activities at various levels of government and by highlighting critical problems and issues in whose solution science and technology can play an important role...."⁴³ The conference did not come directly to grips with the issue of technology assessment per se, but one of the participant's

⁴³ John E. Mock, ed., Science for Society, Proceedings of The National Conference on Goals, Policies and Programs of Federal, State and Local Science Agencies sponsored jointly by the National Science Foundation and the Georgia Science and Technology Commission in Atlanta, Georgia, October 12-14, 1970 (Atlanta: Georgia Science and Technology Commission, 1971), p. 111.

papers suggested that:

...If the goals outlined for technology assessment are to be achieved, the process will be required to be injected in all steps of the technological enterprise....

Industry, state government and other entities must build on this process, and the participants from business executives to professional engineer must develop a new level of social responsibility. 44

None of the papers or roundtable discussions included specific technology assessment programs at State levels, but the final session, devoted to "Where Do We Go From Here? What Are Our Best Future Courses of Action?," included the following:

A beginning has been made to understand and control technical innovations for the common good and to prevent socially destructive disruptions. Yet we will have to do much more. We will have to:

- 1) Learn more about the process of technological change and improve our ability to forecast and assess effects of new technologies.
- 2) Develop the capability to measure the effects of these changes on social systems and evolve a set of reliable social indicators to judge the vitality, success and problems of society.
- 3) Establish institutional focus at the Federal and State Level to develop resources appropriate to the needs of our society, and to share equitably the benefits with all segments of society. 45

Close reading of the above reveals the seeds of future deliberations by State level science and technology specialists.

⁴⁴Edward Wenk, Jr., "The Social Management of Technology," in Science for Society, ed. John E. Mock, Ibid., p. 27.

⁴⁵Mock, Science for Society, p. 188.

7.2.5.2 Working Conference on Technology Assessment in State Government. The National Academy of Public Administration, with sponsorship from the National Science Foundation, held a conference in Washington, D.C., on December 3, 1971. The general purposes of the conference were to:

- (a) assess the principal administrative and policy problems involved in using technology assessment in program decision-making within State government;
- (b) to evaluate the utility of the technique for both legislative and executive officials; and
- (c) to consider how Federal agencies might play mutually supporting roles in the conduct and use of assessments. Within this context, three broad questions were posed to the conferees:
 - (1) What is the nature of technology assessment in State government, and how is it or can it be used in the decision process?
 - (2) What are the capabilities and strengths upon which one can build useful technology assessment in State government?
 - (3) What, if any, technology assessment activities should be carried on in or by State government - how should they be supported and managed? 46

The papers presented at the conference and the ensuing discussions of the issues raised at the meeting served as the basis for an evaluation by a panel of the National Academy of Public Administration. The panel reviewed the conference

⁴⁶ National Academy of Public Administration, Technology Assessment in State Government: A Report on a Working Conference and Recommendations for Action (Washington, D.C., September 1972), p. v.

summary and met for a day-long discussion of the issues raised by the meeting, with the objective of developing recommendations representing the consensus of the Panel. Without taking up the narrative related to each recommendation, it is considered appropriate to enumerate the substance of each of the 10 recommendations reached by the Panel:

1. Technology assessment is a legitimate and necessary State function. To be most effective the technology assessment process must be applied where the principal authority to act is located. Technology assessment is a truly "federal" function - one that needs to be performed at all levels of government depending upon the nature of the program or problem to be assessed.
2. State governments must begin to organize for the effective use of technology assessment by developing a point of central focus within each State and consciously investing State funds in an organized technology assessment process.
3. Key State officials - governors, legislative leaders, agency heads - must develop an appreciation and understanding of technology assessment.
4. The National Science Foundation should sponsor technology assessment pilot projects and demonstration programs where States are willing to invest money or personnel. NSF should support both ad hoc assessments to test methods of conducting and using assessments, and demonstrations of organizing the technology assessment process in two or three legislatures and in several executive agencies.
5. The National Science Foundation should undertake a series of projects to develop better information about how successful technology assessment has been accomplished in States and to stimulate interest among key State officials in technology assessment.

6. The National Science Foundation and the Advisory Commission on Intergovernmental Relations should undertake joint studies on the opportunities and problems in technology assessment where intergovernmental programs are involved, with special attention upon the respective roles of Federal and State agencies.
7. The Committee on Science and Astronautics of the U.S. House of Representatives should conduct hearings on the impact of technology assessment upon State and local government.
8. The Department of Housing and Urban Development should encourage the development of technology assessment as part of the planning process in its 701 grant program.
9. The provisions of the Intergovernmental Personnel Act should be used aggressively to help upgrade technology assessment manpower and analytic capabilities (initially on the environmental impact procedure) in State government agencies. (emphasis added)
10. The Council on Environmental Quality should give special attention in its annual report to Federal-State relations in carrying out the legislative intent of the National Environmental Policy Act. 47

At the time of the conference, it was observed that technology assessment had not been institutionalized in State government as a continuing, ongoing function because technology planning and research and development were rarely viewed as continuing, critical functions of State agencies. There were, however, two notable exceptions:

Two States have attempted to rectify this deficiency by establishing technology assessment agencies. Georgia established a Center for Technology Forecasting and Technology Assessment on April 13, 1970. More recently, Hawaii established a State Center for Science Policy and Technology Assessment. 48

⁴⁷Ibid., pp. 1-5.

⁴⁸Ibid., p. 11.

7.2.5.3 National Action Conference On Intergovernmental Science and Technology Policy. The increasing interest in State and local agencies in furthering the application of technology to social problems is demonstrated by the support given the National Action Conference on Intergovernmental Science and Technology Policy. The conference attracted more than two hundred government, business, and academic leaders. The conference itself was sponsored by the major national science and public administration organizations.⁴⁹

Held in Harrisburg, Pennsylvania, during the period June 21-23, 1972, the conference had the goal of identifying "actions essential now to formulate national policies for effective use of our public and private resources."⁵⁰

The focus was on seeking ways of encouraging the use of technology in support of State and local programs rather than with technology assessment. Nevertheless, the growing recognition that technology can be a vital factor at all levels in

⁴⁹Conference sponsors were: House Committee on Science and Astronautics, National Governors Conference Committee on Science and Technology, National Legislators Conference Committee on Science and Technology, National Governors Council on Science and Technology, Council of State Planning Agencies, Public Technology, Inc., International City Management Association, National Science Foundation, and Pennsylvania Science and Engineering Foundation.

⁵⁰"Action Now Partnerships: Putting Technology to Work," Report of Resolutions for Immediate Action advanced by the National Action Conference on Intergovernmental Science and Technology Policy held in Harrisburg, Pennsylvania, June 21-23, 1972 (Harrisburg: Pennsylvania Office of Science and Technology, August 1972), p. vi.

efforts to improve the quality of life makes it clear that future efforts in this direction will carry with them the need for assessment of new technology. In the Pennsylvania Governor's message to the conferees, he stated:

We must use the findings of science and technology to stimulate new industrial growth in the private sector; we must bring the wonders of modern science and technology to bear upon the pressing human problems of our times; and we must succeed in integrating scientific and technological knowledge into the policy making and operational apparatus of government. 51

The conference reached a consensus on three immediately essential actions:

To strengthen and coordinate Federal, State and local efforts to use technology to meet the nation's diverse economic social and environmental needs, the Conference finds that it is essential to establish:

- (1) A communications, policy and action network to assure that national science policy is based on knowledge of diverse national, State, and local factors.
- (2) An intergovernmental operations structure to assure that public technology programs benefit from the complementary resources of Federal, State and local governments, industry and universities.
- (3) An intergovernmental partnership to provide new funding mechanisms to strengthen the State and local efforts and to stimulate the use of public and private resources. 52

⁵¹Milton J. Shapp, in "Action Now Partnerships," p. iii.

⁵²"Action Now Partnerships," p. 9.

7.2.6 Relationship to EIS Process. It is apparent from the definitions of technology assessment and the discussion of the process in preceding sections that TA is closely related to the environmental impact process. In her study of the technology assessment process in the Federal government, Vary T. Coates examined 97 examples of technology assessment and related studies that were in progress in 1970-1971 or that were recently completed by various agencies and their contractors.⁵³ For purposes of analysis, she divided the studies into six categories, consisting of: Wide-scope Assessments; Partial Assessments; Problem-oriented Assessments; Environmental Impact Statements; Future Studies; and Miscellaneous Studies. The 97 studies themselves were offered by agency officials as examples of technology assessments conducted by their agency. Of the studies examined, 14 fell into the EIS category. (The various EIS studies are used for comparative purposes in chapter 6 of this study).

The impact of technology on the environment has been significant, and the potentially harmful side-effects of new technology has given rise to the need for technology assessment. The Council on Environmental Quality briefly addressed the issue of technology assessment in its Third Annual Report:

It is important to understand the emerging technologies of the future and their implications for the environment and our way of life....

Even more difficult than predicting future technological developments is assessing what the full impact of any particular technology will be....
Despite the difficulties of assessing technology,

⁵³Coates, "Technology and Public Policy," Chapter 4.

it is essential that it be done. Our power to build and destroy has become almost limitless, and the complexity of our technology and institutions has generated decisions with consequences often not apparent for many years....This makes technology assessment even more difficult, but it also makes it even more essential, because the future of mankind will be dictated largely by the nature of our technology.

We must develop the institutional mechanisms capable of making technology assessments. The environmental impact statement process under the National Environmental Policy Act and the advanced testing requirements in the proposed Toxic Substances Control Act are two examples of such institutional mechanisms. 54

The close relationship between technology assessments to be performed under the Office of Technology Assessment and environmental issues is recognized by the Congress:

From the outset we have operated with the understanding that environmental questions would be inherent in virtually all studies to be undertaken....Unlike impact analyses made under NEPA, however, we hope to achieve more of a balancing of the general needs of society. 55

Clearly the analytic processes which flow from NEPA have relevance to the types of studies which are involved in the process of technology assessment. Although the focus of TA is seen as broader in scope than that intended by NEPA, the question of environmental impact is an important issue of any assessment of technological impacts. Indeed, it has been seen that some officials consider an EIS to be synonymous

⁵⁴Council on Environmental Quality, Environmental Quality--The Third Annual Report of the Council on Environmental Quality (Washington, D.C.: Government Printing Office, August 1972), pp. 344-345.

⁵⁵John W. Davis, personal interview, Marietta, Georgia, April 24, 1973.

with technology assessment. Classifying an EIS as a specialized form of TA is appropriate, but it must be recognized that TA is not solely concerned with environmental issues.

7.3 The "Quality of Life" Concept. The purposes of the National Environmental Policy Act are set forth at the beginning of the Act. The Congress enacted the legislation in order:

To declare a national policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation; and to establish a Council on Environmental Quality. 56 (emphasis added)

In declaring the national policy, Congress recognized "the critical importance of restoring and maintaining environmental quality to the overall welfare and development of man."⁵⁷

(emphasis added) The President's order directing implementation of NEPA asserts the policy that "(t)he Federal Government shall provide leadership in protecting and enhancing the quality of the Nation's environment to sustain and enrich human life."⁵⁸ (emphasis added) The entire thrust of the legislation is toward improving the quality of human life. Nowhere in the Act or Executive Order, however, is the term "quality of life" employed, nor is an attempt made to define

⁵⁶The National Environmental Policy Act, Public Law 91-190; 83 Stat. 852 et seq; 42 USC 4321-4347, Section 2.

⁵⁷Ibid., Section 101.

⁵⁸Executive Order 11514, "Protection and Enhancement of Environmental Quality," March 5, 1970, Section 1.

what it is we refer to when we speak of quality of life. The government quest to "enrich human life" raises the issue of how can policy makers determine if various programs yield any improvement or enrichment in the quality of life. Inherent in the issue is the question of our ability to measure the quality of life in a given society. The purpose of this section is to examine the "Quality of Life" (QOL) concept. Some attempts which have been made to develop quantitative measurements of QOL are reviewed and the role of the EIS process in further development of such measurements is examined.

7.3.1 Developing Measures of the "Quality of Life." We do not yet have an acceptable definition of the concept of "Quality of Life." This fact represents a tantalizing challenge to those who seek to develop programs aimed at improving the lot of a particular segment of society or of the society as a whole. Most efforts to develop a suitable definition and measurement of the quality of human life center on the use of some form of "social indicators." These are intended to enumerate a number of aspects of society which may yield some measure of the "goodness" or "badness" of the condition of the members of that society after some form of quantitative value has been assigned to the various "indicators." Frequently, the value of each indicator is combined with other values to arrive at a composite index. The approach is based on the notion that a social index can be computed in a manner similar to that employed in developing economic indicators such as

the Gross National Product, Wholesale Price Index, or Consumer Price Index. Once such a social index is developed, it may be used to measure changes from one time period to another in that society's QOL.

7.3.1.1 Early Studies. Attempts to develop such social indicators are not new. Emile Durkheim's 1897 classic, Le Suicide, is acknowledged as "among the very first modern examples of consistent and organized use of statistical method in social investigation."⁵⁹ A more directly relevant example is Edward L. Thorndike's 1939 study entitled Your City.⁶⁰ Thorndike collected statistical data on 297 items of 310 cities in the United States having a population of 30,000 or more. Of the 297 items or traits, he selected 37 which he believed "significant for the goodness of life for good people in a city."⁶¹ For each item a city was assigned a score which was that city's deviation from the score of the median city in that item or feature. By combining the scores thus assigned, Thorndike developed a "general goodness of life" index for each of the 310 cities.⁶²

⁵⁹Emile Durkheim, Le Suicide, trans. John A. Spaulding and George Simpson (Glencoe, Illinois: The Free Press, 1951), p. 9.

⁶⁰Edward L. Thorndike, Your City (New York: Harcourt, Brace and Company).

⁶¹The 37 items included five related to health, eight concerned with educational opportunities, two concerning public recreation, eight economic and "social" items, five concerned with creature comforts, three concerned with literacy, and six "miscellaneous" items.

⁶²The top ten cities in Thorndike's study were: Pasadena,

Thorndike recognized the nature of complaints which critics level against such efforts.

Certain humanists who abominate all efforts to measure human values, will object to the list of items and to the scores computed from them. "The Florence of Dante and Benvenuto Cellini would be rated far below some humdrum suburb. The Athens of Pericles would not rate as high as Athens, Georgia, by this inventory," they will complain. "It does not include the important things. Radio sets, free schools, swimming-pools and baby clinics cannot atone for bigotry and bad taste. What use are free libraries when the people read trash? It is better to live in a city that is mean by your standards if it has men and women who are sensitive to what is fine and noble." 63

Such criticism is typical of that being made against current efforts to develop social indicators. Thorndike's answer, however, is also applicable in today's case.

The appropriate answer to such criticism is briefly as follows: -- The list of items is imperfect in respect of certain personal qualities in the population, as stated above, but is good as far as it goes.

The list is obviously in many respects relevant to the present only, not to comparisons between cities of the present and of the past....

Moreover, if those personal qualities which the humanist rightly admires and finds neglected by our

Montclair, Cleveland Heights, Berkeley, Brookline, Evanston, Oak Park, Glendale, Santa Barbara, and White Plains. The cities ranked lowest were: Charleston (S.C.), High Point, Meridian, Columbus (Ga.), Augusta, Durham, Savannah, Laredo, Columbia (S.C.), Jackson (Miss.), Macon, and Montgomery. The concentration of Southern cities in the lower list is partially a function of racial discrimination. "It should be kept in mind that these scores represent conditions for the total population. If conditions for the white population only could be ascertained the Southern cities would score much higher. How much higher it is impossible to determine, because many of the 37 items are not available for white residents separately" (Thorndike, Your City), p. 33.

⁶³Ibid., p. 27

list could be measured...the results would not be opposed to those found for the thirty-seven more commonplace excellences, but would correlate with them positively. A high rank in a composite of them will be significant of openmindedness and good taste.

...Just as high rank for the absence of poverty and the presence of creature comforts are signs of high rank for intellectual abilities and interests, so both of these, especially the latter, are signs of high rank in whatever is fine and noble. Any honest humanist will find far more of what he desires in the cities ranking high by our list than in those ranking low. 64

7.3.1.2 Modern Efforts. Interest in social indicators received renewed impetus during the nineteen-sixties. The media emphasis on the "environmental crisis" doubtless was a major stimulant in this direction. Robert Livingston of the Environmental Protection Agency's Environmental Studies Division compiled an excellent anthology of readings on the QOL concept which contains a reasonably comprehensive tabulation of recent literature and works in progress on social indicators.⁶⁵ Citing studies on Washington, D.C., and New York City, Livingston enumerates a number of major categories of social indicators developed for these cities:

- . Income
- . Unemployment
- . Poverty
- . Housing (costs)
- . Education
- . Health
- . Mental Health
- . Environmental Quality

⁶⁴Ibid., pp. 27-28.

⁶⁵Robert Livingston, comp., An Anthology of Selected Readings for the Symposium on The Quality of Life Concept (Washington, D.C.: Environmental Protection Agency, Office of Research and Development, Environmental Studies Division), pp. I-2-I-4.

- . Public Order/Crime
- . Traffic Safety
- . Racial Equality
- . Community Concern
- . Revenue/Taxation
- . Welfare and Social Services ⁶⁶

The Environmental Protection Agency sponsored a symposium on the QOL concept at Airlie House in Warrenton, Virginia, during the period August 29-31, 1972. The objectives of the conference were to explore the QOL concept, define QOL in terms of its components, and to develop suggested quantitative approaches to its use in guiding public policy. Commenting on the hoped for results of the symposium, EPA's Assistant Administrator for Research and Monitoring enumerated a number of expected accomplishments.

...The hope was that (a cross section of the interested community) could shed some light on the richness and possible gross ordering of the Quality of Life indicators. In the process it was hoped that there might possibly emerge a sub-set of indicators with substantial commonality and that this commonality would be sufficient to destroy the notion that a population of 200 million people would, of necessity, provide 200 million different expressions of Quality of Life. Second, it was the hope that out of this symposium would come some sense of whether a potential mechanism exists for systematically incorporating the inputs of the public into the decision making processes that affect the quality of their lives. Finally, it was felt that, at the very least, one could expect such a conference to provide a sense of what additional research is needed in this area. ⁶⁷

⁶⁶ Ibid., p. I-3. See also The Quality of Life Concept: A Potential New Tool for Decision-Makers, report of Airlie House Conference on the QOL concept, August 29-31, (Washington, D.C.: Environmental Protection Agency, March 1973), p. II-4-II-5.

⁶⁷ EPA, The Quality of Life Concept, p.iii.

One of the major outcomes of the conference was to underscore the fact that no consensus exists regarding the definition of QOL. Although the report of the symposium dealt with quantitative approaches, it acknowledged that:

...the tools are not yet available which will enable one to confidently do such things as: quantify work satisfaction; set a value on leisure time; relate both work and leisure to such debates as growth vs. non-growth; and then relate it all to the environment. 68 (emphasis added)

The conferees grappled with the definitional problems associated with QOL, resulting in the recognition that there are three general types of QOL definitions:

- 1) Precise definitions of what constitutes QOL
- 2) List of components or factors of QOL without weights
- 3) Indirect definitions through definitions of social indicators (historically, a common way of "defining" QOL). 69

As part of a study of the QOL concept, Kenneth E. Hornback and several EPA Summer Fellows developed a list of 30 quality of life factors.⁷⁰ These factors were incorporated into a subsequent attempt to develop a quantitative measure of the quality of life, in which the QOL factors were defined as "those attributes or characteristics of the society and/or

⁶⁸Ibid., p. I-3

⁶⁹Ibid., p. I-4

⁷⁰Kenneth E. Hornback et al, "Quality of Life Report" (Washington, D.C.: EPA Summer Fellows Program, 1972).

environment which affect life quality."⁷¹ The 30 factors are encompassed under six different headings:

- . Economic Environment (Work satisfaction, income, income distribution, economic security).
- . Political Environment (Informed constituency, civil liberties, electoral participation, non-electoral participation, government responsiveness).
- . Physical Environment (Housing, transportation, material quality, public services, aesthetics).
- . Social Environment (Community, social stability, culture, physical security, family, socialization, recreation).
- . Health (Physical, mental, nourishment).
- . Natural Environment (Air quality, water quality, radiation, solid waste, toxicity, noise).

The objective of this approach is to develop both objective and subjective measures of each of these factors and combine them through a weighting process to obtain an overall quality of life index for a particular population.

It can be seen that this approach is similar to that developed by Thorndike,⁷² except here there is more emphasis on measurement of natural environment factors which are in areas of EPA regulatory concern.

Hornback and his associates in the EPA Summer Fellows Program compared their list of QOL factors with ten other

⁷¹Kenneth E. Hornback and Robert W. Shaw, Jr., "Toward a Quantitative Measure of the Quality of Life" (Paper delivered at the Quality of Life Symposium, Environmental Protection Agency, August 1972), p. 5.

⁷²Cf. footnote 61.

lists developed by other researchers during the period 1967-1972 and found "some underlying structure that is common to essentially all of them."⁷³ Eight of the other lists selected for comparison contained environmental elements considered to parallel the EPA Fellows list.

The major exception to the trend toward commonality in the lists was in the case of a psychologically oriented list developed through the Delphi technique.⁷⁴ Here, the researchers reduced an initial list of 48 items to a grouping of 13 factors rank-ordered on the basis of relative importance.

A somewhat different approach involving psychological factors has been developed by researchers of the Stanford Research Institute. The basic premises underlying this approach are that:

- 1) people's inner needs, values, and beliefs are dominating determinants of their sense of quality of life,
- 2) personal growth is a necessary condition for major advances in QOL, and
- 3) personal growth is correlated with progress up Abraham Maslow's hierarchy of needs.⁷⁵

These researchers suggest an approach to quantifying five

⁷³EPA, The Quality of Life Concept, p. I-46.

⁷⁴Norman C. Dalkey and Daniel L. Rourke, "The Delphi Procedure and Rating Quality of Life Factors," an extract from "Experimental Assessment of Delphi: Procedures with Group Value Judgments," Rand, 1972.

⁷⁵Arnold Mitchell, Thomas J. Logothetti, and Robert C. Kantor, An Approach to Measuring Quality of Life (Menlo Park, Calif.: Stanford Research Institute, 1971), p. 1.

QOL scales corresponding to the five need levels of Maslow's hierarchy. The research is conceptual in nature, however, and entails a great many "field testing" problems.

7.3.1.3 City and State Indexes. Studies on cities have previously been mentioned in connection with Thorndike's study and studies of Washington, D.C. and New York City.⁷⁶ A Wall Street Journal article on measuring QOL reports the development of an index by a business firm.

...(The) First National Bank of Minneapolis in its 1971 annual report outlined how it hoped to measure 10 components that taken together should give an indication of the quality of life in the Twin Cities. Among the categories are job opportunities, environment, housing, health and income. ⁷⁷ (emphasis added)

The Midwest Research Institute (MRI) recently released a report entitled The Quality of Life in the United States,⁷⁸ which is a further refinement of a similar report published by MRI in 1967.⁷⁹ Based essentially on criteria developed by the Eisenhower Commission on National Goals, the report combined more than 100 individual measures into nine different categories of social indicators. The various categories

⁷⁶ Cf. footnotes 60 and 66.

⁷⁷ Richard D. James, "Measuring the Quality of Life," Wall Street Journal, May 18, 1972, p. 18.

⁷⁸ Ben-Chieh Liu, Robert Gustafson, and Bruce Macy, The Quality of Life in the United States (Kansas City: Midwest Research Institute, May 1973).

⁷⁹ John O. Wilson, The Quality of Life in America (Kansas City: Midwest Research Institute, Winter 1967).

which makeup the framework for an overall QOL index are:

- * Individual Status
- * Individual Equality
- * Living Conditions
- * Agriculture
- * Technology
- * Economic Status
- * Education
- * Health and Welfare
- * State and Local Governments

The MRI list of social indicators is comparable in many respects to the list developed by Thorndike and researchers on the studies of New York City and Washington, D.C.⁸⁰ Scoring for the MRI index consisted of calculating a mean ($\bar{X}$) for each indicator and setting it to be equal to 1.00. A state's score is represented by a percentage score above or below the average score of 1.00. The higher the index, the better QOL is for a particular state. States were rated excellent (A), average (B), or substandard (C), on the basis of deviation from the mean. If a state's score was more than one standard deviation above the mean, it received an "A" rating. If a state's score was more than one standard deviation below the mean, it received a "C" rating. State's whose score fell within $\pm$ one standard deviation of the mean received a "B" rating.

The scores obtained in the various categories were combined into an overall QOL index and the results were compared to MRI's 1967 results as well as two rankings which

⁸⁰Cf. footnotes 60 and 66. See also list on pp. 7-33 and 7-44.

were developed by Lifestyle Magazine. The final scores and ratings, along with comparisons to the earlier studies, are presented in Table 7-1.

In the latest MRI study, six states received "A" ratings, while 33 were rated "B" and 11 received a "C" rating. Of the states with excellent ratings, California led the nation with the highest index score, followed in order by Colorado, Connecticut, Washington, Oregon, and Wyoming. Of those states rated substandard, South Carolina ranked lowest, followed in ascending order by Alabama, Mississippi, Kentucky, North Carolina, Louisiana, West Virginia, Arkansas, Virginia, Tennessee, and Georgia.

In a report on the MRI study, Newsweek extracted a number of statistics to highlight the diversity of elements taken into account in the overall index:

...Arizona leads the nation in divorces (599 per 1,000 residents). The District of Columbia has the most lawyers (19,376 per 100,000), the most newspaper readers and the most disturbed citizens (48.9 per 1,000, vs. a national average of 18). Mississippi has the most libraries (14.5 per 100,000), but fewer books in them than any other state except West Virginia: only 87/100 of a volume for each citizen. ⁸¹

Publication of such lists generates the kinds of complaints dealt with by Thorndike,⁸² and yields to personal loyalties. In the case of the MRI report:

⁸¹"The State of the States: Who's On Top?," Newsweek, June 25, 1973, p. 26.

⁸²Cf. footnote 64.

Table 7-1
Social-Economic-Political-Environmental Index and
Overall Ranking of the Quality of Life

Index	Rating #	Rank of QOL			
		MRI	1973	1972	Lifestyle Magazine ^b 1931
Alabama	C	50	48	47	47
Alaska	B	25	34	30	NA
Arizona	B	11	23	40	34
Arkansas	C	44	47	48	44
California	A-1	1	1	9	5
Colorado	A-2	2	6	22	22
Connecticut	A-3	3	3	1	2
Delaware	B	18	12	16	25
District of Columbia	B	14	NA	NA	NA
Florida	B	38	30	34	36
Georgia	C	41	44	44	45
Hawaii	B	15	14	6	NA
Idaho	B	27	28	27	31
Illinois	B	31	11	4	8
Indiana	B	36	25	28	23

Source: Ben-Chieh Liu, Robert Gustafson, and Bruce Macy, The Quality of Life in the United States (Kansas City: Midwest Research Institute, May, 1973), p. 23.
a/ John O. Wilson, The Quality of Life in America (Kansas City: Midwest Research Institute, Winter 1967), pp. 10-11. b/ Lifestyle Publishing, Inc., Lifestyle Magazine (November 1972), p. 18. #/ Ratings: A=Excellent; B=Average; C=Substandard.

Table 7-1 (continued)

Social-Economic-Political-Environmental Index and
Overall Ranking of the Quality of Life

Index	Rating	Rank of QOL		
		MRI	1972	Lifestyle Magazine 1972
		1973	1967	1931
Iowa	B	22	10	11
Kansas	B	23	26	23
Kentucky	C	48	46	45
Louisiana	C	46	45	43
Maine	B	39	39	26
Maryland	B	30	22	15
Massachusetts	B	7	4	5
Michigan	B	26	16	13
Minnesota	B	13	2	2
Mississippi	C	49	50	50
Missouri	B	40	41	36
Montana	B	9	31	33
Nebraska	B	16	32	19
Nevada	B	19	20	31
New Hampshire	B	34	29	7
New Jersey	B	20	13	14
New Mexico	B	24	38	37
New York	B	12	7	3
North Carolina	C	47	40	46
North Dakota	B	29	19	32

Table 7-1 (continued)

Social-Economic-Political-Environmental Index and
Overall Ranking of the Quality of Life

Index	Rating	Rank of QOL			
		MRI		Lifestyle Magazine	
		1973	1967	1972	1931
Ohio	B	35	17.5	21	16
Oklahoma	B	33	33	39	35
Oregon	A-5	5	8	17	9
Pennsylvania	B	17	21	20	20
Rhode Island	B	10	15	8	10
South Carolina	C	51	49	49	46
South Dakota	B	32	37	29	32
Tennessee	C	42	42	38	43
Texas	B	37	36	41	38
Utah	B	8	17.5	10	18
Vermont	B	28	27	24	21
Virginia	C	43	35	35	37
Washington	A-4	4	5	12	13
West Virginia	C	45	43	42	33
Wisconsin	B	21	9	18	14
Wyoming	A-6	6	24	25	29
United States					
Standard Deviation					

A = Excellent (greater than $\bar{X} + S$)B = Average ($\bar{X} + S$)C = Substandard ($\bar{X} - S$)

...the loudest cry of pain has come from Minnesota. Six years ago the Gopher State placed second...; this year it burrowed down to thirteenth place. "I've been to Los Angeles and San Francisco three times in the last eighteen months, "sniffed Minnesota Gov. Wendell Anderson, "and I just find it hard to believe they set a model out there in terms of quality of life." 83

Environmental factors are included in the "Living Conditions" indicator in the MRI report. None of the factors included under "Social and Environmental Conditions" of this indicator were included in the 1967 study. The complete list of component variables of living conditions is presented in Table 7-2. The MRI report noted that:

...the environmental indicator encompasses many factors other than the currently popular pollution measure. Factors such as air and water pollution, traffic congestion, etc., would have been included had there been sufficient data. 84

The results of the latest rating of the "Living Conditions" indicator are compared with the results of the rankings on the same indicator in the 1967 study. This comparison is presented in Table 7-3. It is noted that there is relatively minor variation in the index scores of most states in the 1973 study. It can be seen, however, that considerable shifting of the rank order of the states occurs between the two studies. It is concluded that the additional measures of "Social and Environmental Conditions" included in the latest report tend

⁸³"The State of the States," p.26

⁸⁴Liu, The Quality of Life, p. 7.

Table 7-2

Component Variables of Living Conditions

A. GENERAL CONDITONS

- a. Percent of families with income more than the poverty level
- b. Weighted index of crime rate
- c. Percent of occupied housing units with plumbing facilities
- d. Cost adjusted cumulative comprehensive planning assistance grant for community planning per capita
- e. Cost of living index

B. FACILITIES

- a. State and local park and recreational areas, acres per 100,000 population
- b. Number of beds in nursing and related care homes per 100,000 population
- c. Hospital beds per 100,000 population
- d. Number of telephones per 100,000 population
- e. Library
 - 1. Number of public libraries per 100,000 population
 - 2. Library books per capita
- f. Symphony orchestras per 100,000 population

C. SOCIAL AND ENVIRONMENTAL CONDITIONS^{1/}

- a. Accident death rate per 100,000 population
- b. Motor vehicle traffic mileage death rate by place of accident, deaths per 100,000,000 vehicle miles
- c. Marriage-divorce rate
- d. Normal per year average of possible sunshine days
- e. Average annual relative humidity
- f. Health and welfare index

Source: Ben-Chieh Liu, Robert Gustafson, and Bruce Macy, The Quality of Life in the United States (Kansas City: Midwest Research Institute, May 1973), p. 8.

1/ None of the factors in Section C appeared in the 1967 MRI study as part of the Living Conditions indicator.

to account for the wide variation in the rankings, at least in the case of all but the lowest ranking states.

It can be seen from Table 7-1 that the lower ranking states have tended to be so rated for more than four decades. According to the MRI analysis of the overall ratings:

The low rankings appear to be attributable primarily to the depressed economic conditions in those states, and are closely associated with rankings of personal income per capita...

However, personal income per capita does not necessarily reflect the QOL in states other than those with a very low rank. Some states rank fairly high in terms of QOL, but have a lower personal income per capita, and vice versa.

...For instance, Alaska had the second highest personal income per capita in 1969, but its QOL rankings were 34, 25, and 30, respectively, according to the three different studies. Similarly, high income-low QOL cases are found in Delaware, Florida, Illinois, Indiana, Maryland, and Michigan. In contrast, states such as Colorado, Idaho, Minnesota, North Dakota, Oregon, Utah, and Washington all have relatively higher rankings in QOL than their respective income rankings....

...In summary, it may be concluded from the above observations that some minimal economic well-being is a necessary condition for achieving minimum acceptable QOL. Beyond that, an extremely high income level does not necessarily represent an excellent QOL, and the latter is not always the cause of the former. In other words, QOL has its own ingredients, and material wealth bears little ascertainable relationship to it....⁸⁵

The studies discussed above have all related to various facets of the quality of life in different cities and states of the United States of America. A similar approach has been employed in developing indexes which gauge the QOL in different

⁸⁵ Ibid., pp. 21-22.

countries of the world.

7.3.1.4 International Indexes. Two different ratings of countries have been published by The Economist magazine of London.⁸⁶ The latest report covered fourteen countries and was based on statistical measures of 15 different social indicators. Some of the indicators are given positive "weight" as factors which enhance or improve the "pleasantness" of living conditions in a country. Others, such as population density, suicide, and murder, are given negative "weight" on the basis that such social conditions represent negative indicators of unpleasantness. The first report treated divorce as a negative factor indicative of social tension, but debated with the notion that it could be treated as a positive factor on grounds that it indicated an "enlightened society with liberal divorce laws." The latest report computes an aggregate index score with divorce treated both positively and negatively. The results of the study are presented in Table 7-4 and Table 7-5. The latter table reflects the rankings with divorce considered as a negative factor, as a positive factor, and without divorce taken into account.

Each country's score is computed as a percentage of the average for all 14 countries combined. For example, deaths

⁸⁶"Where the Grass is Greener," The Economist, December 25, 1971, p. 15. The second rating appeared in "More Green Grass," January 22, 1972.

Table 7-4
International Social Indicators*

Country	+ Early Marriage	- Population per doctor	- Suicide	- Deaths from road accidents	- Infant mortality	+ Proportion of dwellings with baths	+ Ratio of TV's to people	+ Ratio of tele- phones to people	+ Circulation of daily newspapers
Australia	+29	-18	-10	-27	+11	+85	- 9	+ 5	+11
Belgium	+11	+11	-11	-16	- 9	-56	-12	-32	-20
Canada	+29	- 3	+35	-22	- 4	+51	+23	+53	-37
Czechoslovakia	+51	+33	-77	+22	-15	-38	-12	-56	-13
France	- 4	- 7	-15	-24	+17	-47	-15	-44	-23
Germany (Fed Rep)	- 7	+18	-60	-31	-17	- 3	+10	-26	+ 1
Holland	-26	-17	+55	- 1	+33	-51	- 6	-13	- 8
Italy	-22	+22	+56	+ 2	-51	-47	-28	-43	-26
Japan	-77	-27	- 3	+21	+23	+11	-10	-17	+46
Spain	-55	- 6	+69	+47	-49	-56	-29	-57	-52
Sweden	-33	-11	-60	+34	+34	+14	+27	+89	+58
Switzerland	-11	+ 9	-27	-11	+22	+29	-22	+54	+13
United Kingdom	+29	-14	+31	+32	+ 6	+45	+19	-11	+47
USA	+88	+ 9	+21	-21	- 4	+66	+67	+98	+ 3

Source: Adapted from The Economist, January 22, 1972, p. 18.
* ± indicates score above or below average figure.

Table 7-4 (continued)
International Social Indicators

Country	- Population density	- Murder	+ Students in higher education	+ Car ownership	+ Economic growth	+ Divorce
Australia	+ 99	- 1	+ 5	+ 45	- 27	<u>±</u> 6
Belgium	-121	+ 42	- 48	- 4	- 4	<u>±</u> 28
Canada	+ 99	- 15	+ 78	+ 48	- 34	<u>±</u> 37
Czechoslovakia	+ 21	+ 21	- 21	- 77	+ 45	<u>±</u> 59
France	+ 36	+ 35	0	+ 15	+ 16	<u>±</u> 14
Germany (Fed Rep)	- 66	+ 6	- 42	+ 1	- 13	<u>±</u> 14
Holland	-120	+ 63	+ 18	- 14	- 7	<u>±</u> 33
Italy	- 24	+ 28	- 41	- 18	+ 23	<u>±</u> 100*
Japan	- 94	- 1	+ 13	- 67	+150	<u>±</u> 4
Spain	+ 55	+ 86	- 58	- 70	+ 25	<u>±</u> 100*
Sweden	+ 87	+ 35	+ 1	+ 33	- 27	<u>±</u> 55
Switzerland	- 6	+ 42	- 50	0	- 38	<u>±</u> 2
United Kingdom	- 59	+ 49	- 38	0	- 62	<u>±</u> 5
USA	+ 85	-395	<u>-</u> 179	+107	- 47	<u>±</u> 201

* Spain and Italy were given an arbitrary, artificial score of ± 100 on divorce

Source: The Economist, January 22, 1972, p. 18.
* + indicates score above or below average figure

from road accidents in all 14 countries averaged 22 per 100,000 people in 1967 (the latest year for which comparable figures were available). The average in West Germany was 29 per 100,000, or 31 per cent above the average for all countries being compared. West Germany's score, therefore, is -31, reflecting the fact that deaths from road accidents are negative indicators of "unpleasantness." The scoring, then, is proportional to population. A score for each factor is "unweighted" by varying size of the countries. The "final score" for a country, here referred to as the "Aggregate International QOL Index," is simply an unweighted summation of each country's factor scores. It is apparent that a country which scored average on every factor would wind up with a score of zero. Thus, a final score which is positive indicates that the country is "above average," and a negative score indicates that country is "below average." The developers of the index chose not to weight the various factors in order of importance because "that begs all sorts of value judgments."⁸⁷

The rank order of the United States is heavily influenced by the treatment of divorce, moving from fifth place when it is viewed as an indicator of "social tension," to first place when treated as a "positive indicator of a liberal society." Likewise, but only in a negative direction, the appalling

⁸⁷"More Green Grass," p. 18.

murder index for the United States has a marked influence on the aggregate score.

7.3.1.5 Samuelson's Index of Net Economic Welfare.

The noted economist, Paul A. Samuelson, recently completed the latest edition (ninth) of his famous text entitled Economics: An Introductory Analysis.⁸⁸ The publisher considers "the big selling point for the new edition--and its main contribution, in the author's view--is the introduction of a life-quality indicator that he has dubbed 'net economic welfare' or NEW."⁸⁹

The NEW idea involves adjusting "GNP for the benefits of leisure, for household work, for pollution and its abatement, for commuting costs, and for 'the disamenities of urban life,' among other things."⁹⁰ According to Samuelson:

You may have to trade off some conventional GNP growth to get more NEW growth....It's an absolutely overdue concept in economics, that people can trade off quantity of goods for quality of life....(T)he quality-of-life considerations that are involved in NEW will be in all the textbooks 10 years from now. 91

Samuelson is careful to give credit where credit is due. In this instance, he acknowledges that his discussion of NEW borrows from the pioneering study by William Nordhaus and

⁸⁸Paul A. Samuelson, Economics, 9th ed. (New York: McGraw-Hill Book Company, 1973).

⁸⁹"Samuelson's Text Never Grows Old," Business Week, March 24, 1973, p. 58.

⁹⁰Ibid.

⁹¹Ibid.

James Tobin, "Is Growth Obsolete?" in which they develop the idea of modifying GNP into a Measure of Economic Welfare (MEW).⁹² He has simply "renamed" Nordhaus and Tobin's MEW as Net Economic Welfare (NEW). Samuelson's term will be used throughout the remainder of this discussion.

Nordhaus and Tobin summarize the basic concept as follows:

Our adjustments to GNP fall into three general categories: reclassification of GNP expenditures as consumption, investment, and intermediate; imputation for the services of consumer capital, for leisure, and for the product of household work; correction for some of the disamenities of urbanization.⁹³

In making these adjustments, Nordhaus and Tobin exclude

...such things as defense spending, police and sanitation services and road maintenance. These items...are simply overhead costs of running a complex industrial state...and they don't really produce any net improvement in the quality of life.⁹⁴

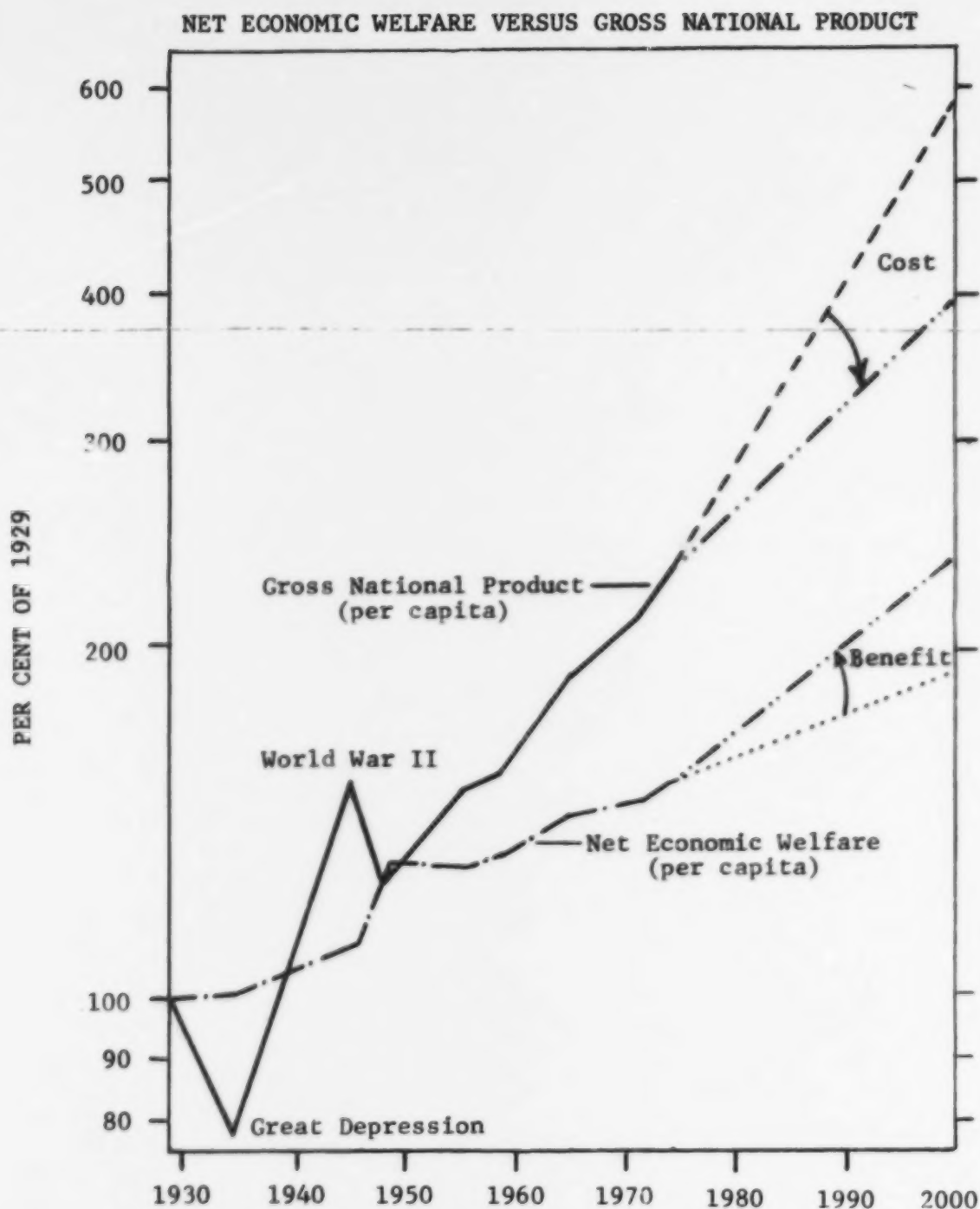
Samuelson extrapolated Nordhaus and Tobin's 1929-1965 estimates to 1973 and then projected future GNP and NEW curves to the year 2000, the results of which appear in Figure 7-1. It will be noted in Figure 7-1 that NEW rises

⁹² Samuelson, *Economics*, p. 195. See William D. Nordhaus and James Tobin, "Is Growth Obsolete?" in *Fiftieth Anniversary Colloquium V* (National Bureau of Economic Research, Columbia University Press, New York, 1972).

⁹³ Ibid. See footnote 17 therein.

⁹⁴ James, "Measuring the Quality of Life," p. 18.

Figure 7-1



Source: Adapted from Paul A. Samuelson, *Economics*, 9th ed. (New York: McGraw-Hill Book Company, 1973), p. 4.

much more slowly than GNP. During the period since 1947, for example, it can be seen that GNP has risen more than twice as fast as NEW. The projections of GNP and NEW to the year 2000 represent what our conditions would be if we do nothing about pollution. If resources are applied to the pollution problem, the quality of life is improved. This is represented as a "Benefit" by the upward shift of the NEW curve. Such an increase in QOL involves a "Cost," however, and this is shown by the projected GNP curve shifting downward. With regard to such adjustments, Samuelson notes that:

...if people really wish to improve the quality of life -- and not just talk about doing so -- we must adopt public and private policies that sacrifice some ordinary GNP growth to get more NEW growth. 95

Interestingly enough, Samuelson notes that the issues involved in the QOL concept were predicted by John M. Keynes as early as 1930, when he wrote:

(S)uppose that a hundred years hence we are all of us...eight times better off...than we are today....Assuming no important wars and no important increase in population, the economic problem may be solved....This means that the economic problem is not -- if we look into the future -- the permanent problem of the human race.

...If the economic problem is solved, mankind will be deprived of its traditional purpose....I think with dread of the readjustment of the habits and instincts of the ordinary man, bred into him for countless generations, which he may be asked to discard within a few decades.

...Thus for the first time since his creation man will be faced with his real, his permanent problem -- how to use his freedom from pressing

⁹⁵ Samuelson, Economics, p. 4.

economic cares, how to occupy the leisure, which science and compound interest will have won for him, to live wisely and agreeably and well.

...The love of money as a possession -- as distinguished from the love of money as a means to the enjoyments and realities of life -- will be recognized for what it is, a somewhat disgusting morbidity, one of those semi-criminal, semi-pathological propensities which one hands over with a shudder to the specialists in mental disease. 96

Having examined the QOL concept in some detail, it is now appropriate to consider the relevance of the concept to environmental management, particularly its relevance to the EIS process.

7.3.2 Relationship to Environmental Management. Although it was shown that there is no consensus on what constitutes QOL, it is clear that there is dissatisfaction with traditional economic measures, such as GNP and price indexes, as the measure of life quality in the United States and other countries of the world. Attempts by social scientists to develop alternative measures of social conditions have a long history, but new emphasis was added by the environmental "crusade" of the late sixties.

It has been seen that virtually all attempts to develop social indicators, or measures of QOL, have involved some consideration of environmental values. The degree of emphasis varies from general environmental factors, such as those found in the 1973 study by the Midwest Research Institute,⁹⁷ to highly specific pollution measures, such as those proposed

⁹⁶Ibid., p. 814.

⁹⁷Cf. footnote 78.

in the EPA Fellows list of QOL factors.⁹⁸ The measurements which are being made of various environmental conditions as part of the EIS process provide valuable guidance to interested social scientists on the methodology of measuring environmental factors for inclusion in QOL indexes. It is unlikely, however, that data obtained in a particular EIS could be used in a QOL index. The data requirements for QOL are such that the measure must be generally applicable to a wide sector of the society. Clearly, the data of an EIS are specific to the project under consideration.

The issues involved in the QOL concept seem to be matters of primary concern to public policy makers, i.e., most of the measures tend to involve factors which are directly influenced by public agency activities. The implications are that governmental leaders should begin to take such measurements into account in reaching allocation decisions in order to improve the overall quality of living. Theoretically, scarce public resources could be allocated on the basis of a deliberate policy of enhancing one or more indicators in a given region with the objective of raising the region's index closer to the average index of the selected indicators. From the standpoint of environmental management considerations, this would entail formulating policies based on measurement of existing

⁹⁸Cf. footnote 70.

conditions and clearly defined standards of desired conditions. This is actually being done in the environmental area in the case of the Environmental Protection Agency's program of setting and enforcing environmental pollution standards.

As has been made clear, however, QOL encompasses a broad range of factors and the goal is to achieve improvements in the overall quality of living. This means that environmental policies must be integrated into a system-wide approach to resource allocation which takes into account all the factors which combine to make a satisfactory human existence. The efforts to develop such a QOL guide for decision makers have not yet been successful, but it is to be hoped that such efforts will continue, for society's sake.

It may be concluded from the above discussion of the QOL concept that the major difficulty in using QOL as a decision guide is the problem of developing criteria measures which enjoy wide spread acceptance as true "indicators" of the society's actual condition, notwithstanding the greater problem of defining the society's desired condition. The measurement problem is also of central concern in the next section of this study relating to "social auditing."

7.4 Social Auditing. The increase in public attention to governmental and industry practices affecting the quality of the environment has been accompanied by a parallel increase in public concern with other corporate practices having a social impact. This concern with industry's performance in areas of social significance is generally discussed in terms of "corporate social responsibility" and raises the question of how industry is to reflect its fulfillment of these "social obligations" in its balance sheet. Some firms are attempting to respond to demands for public accountability by developing a "social audit" (SA) of their activities. The emerging concept of social auditing is examined in this section. In the course of the examination, several different definitions are presented, the forces giving rise to the need for such "audits" are considered, some example of initial SA's are reviewed, and the role of environmental assessments is discussed.⁹⁹

7.4.1 Defining the Concept. The term "social audit" is not well defined in the literature. At first blush, one would expect the term to encompass something more than what J. O. McKinsey referred to as a management audit, and which Koontz and O'Donnell have called an "enterprise self-audit."¹⁰⁰ Jackson Martindell gained wide spread recognition for his role

⁹⁹Portions of the material in this section are based on a study by Donald R. Hudson, "The Next Step Toward Social Auditing" (Paper delivered at the Annual Meeting of the Southern Management Association, Washington, D.C., November 11, 1972).

¹⁰⁰Harold Koontz and Cyril O'Donnell, Principles of Management, 4th ed. (New York: McGraw-Hill Book Company, 1968), pp. 711-712.

in the development of the American Institute of Management's auditing program.¹⁰¹ A somewhat comparable approach is proposed by Robert B. Buchele in his article "How to Evaluate a Firm."¹⁰²

All of these are approaches to appraising management performance which share an orientation toward internal rather than external activities of the firm, i.e., they do not concern themselves with the firm's performance in a number of social areas. Social auditing is a process which is oriented toward assessing the external performance of the firm.

The earliest reference to a "social audit" was by Frederick H. Blum in a 1952 article in the Harvard Business Review entitled "Social Audit of the Enterprise."¹⁰³ Blum described what would basically be considered a morale survey, although he attempted to indicate that his studies amounted to more than that. Commenting on Blum's work in The Social Responsibilities of Business, Morrell Heald noted that:

Although Blum did not suggest it, the extension of (his) approach to the evaluation of a wider range

¹⁰¹Jackson Martindell, "Management Audits Simplified," in Management: A Book of Readings, 2d ed., ed. Harold Koontz and Cyril O'Donnell (New York: McGraw-Hill Book Company, 1968), pp. 618-625.

¹⁰²Robert B. Buchele, "How to Evaluate a Firm," in Readings in Business Policy, ed. Edmund R. Gray (New York: Appleton-Century-Crofts, 1968), pp. 483-504.

¹⁰³Frederick H. Blum, "Social Audit of the Enterprise," Harvard Business Review, March-April, 1952, pp. 77-86.

of company programs offered interesting possibilities. In effect, some way of achieving an audit such as Blum proposed was what the situation seemed to call for; but his idea fell on deaf ears. 104

Howard R. Bowen subsequently proposed that firms "subject themselves to periodic examination by independent outside experts who would evaluate the performance of the business from the social point of view."¹⁰⁵

A relatively brief definition of a social audit is provided by Raymond A. Bauer and Dan H. Fenn, Jr., in a recent Harvard Business Review article entitled "What Is a Corporate Social Audit?" These authors take a social audit to mean:

a commitment to systematic assessment of and reporting on some meaningful, definable domain of a company's activities that have social impact. 106

A somewhat more specific definition is provided by Steven C. Dilley, who considers a social audit to be:

an investigation of an enterprise's performance as a member of the community in which it has its primary impact; such investigation consisting of the preparation of an inventory of the socially relevant activities of the enterprise, a monetary quantification of the social cost and benefits resulting from those activities, and compilation

¹⁰⁴ Morrell Heald, The Social Responsibilities of Business (Cleveland: The Press of Case Western Reserve University, 1970), p. 312.

¹⁰⁵ Howard R. Bowen, Social Responsibilities of the Businessman (New York: Harper & Row, 1953), p. 155.

¹⁰⁶ Raymond A. Bauer and Dan H. Fenn, Jr., "What Is a Corporate Social Audit?," Harvard Business Review, January-February, 1973, p. 38.

of other quantitative information providing insight into the social performance of the enterprise. 107

Dilley's definition encompasses the substance of the idea reflected in that of Fenn and Bauer. Two other useful definitions are provided by Dilley in relation to the one on SA. The first pertains to "socially relevant activities." By this, Dilley refers to:

those activities that affect the social responsibility of the enterprise toward its employees, customers and the general public and are required by law or social pressure, done voluntarily by the company, or done by the company without adequate compensation being paid by or to the company and are currently the subject of general public concern or which have not been recognized as socially relevant in the past. 108

The second is a definition of "social responsibility," by which Dilley means:

the performance (or non-performance) of activities by the private enterprise without the expectation of direct economic gain or loss, for the purpose of improving the social well-being of the community or one of its constituent groups. These activities are those generally recognized by society and/or the law as beneficial to the well-being of society. 109

For purposes of this discussion, the definitions put forth by Dilley will be accepted. Having accepted a working

¹⁰⁷ Steven C. Dilley, "Accounting for Externalities: Conducting a Social Audit and Preparing a Social Responsibility Annual Report for a Public Utility," (Ph.D. diss., The University of Wisconsin, 1972), p. 91

¹⁰⁸ Ibid.

¹⁰⁹ Ibid., pp. 91-92.

definition, it is appropriate to now give some consideration to the forces which gave rise to the need for such an "audit."

7.4.2 Social Demands on Business. Development of social auditing may be traced to the increased demands of the public for business to help improve society by adopting "socially responsible" programs. The range of such programs is reflected in the ten major fields depicted in Table 7-6.

The Committee for Economic Development (CED) reports public opinion research conducted during 1970 which showed that:

...twice as many people think companies are not doing as much as they should to satisfy consumer needs at reasonable prices as those who believe business is doing a particularly good job for consumers....

Most significant, 60 per cent of the electorate also consider that another main responsibility of business is to keep the environment clean and free of pollution. Public criticism has increased to the point where 49 per cent do not believe corporations are doing as much as they should to improve the environment, as against only 7 per cent who think they are doing a particularly good job.

...Most of the public are not convinced that companies are making any real progress toward solving their pollution problems, and about 80 per cent favor closing plants that violate pollution regulations. 110 (emphasis added)

¹¹⁰ Committee for Economic Development, Social Responsibilities of Business Corporations (New York: Committee for Economic Development, June 1971), pp. 14-15.

Table 7-6

Spectrum of Business Activities to Improve Society

A. ECONOMIC GROWTH AND EFFICIENCY

- a. Increasing productivity in the private sector of the economy
- b. Improving the innovativeness and performance of business management
- c. Enhancing competition
- d. Cooperating with the government in developing more effective measures to control inflation
- e. Supporting fiscal policies for steady economic growth
- f. Helping with the post-Vietnam conversion of the economy

B. EDUCATION

- a. Direct financial aid to schools, including scholarships, grants, and tuition refunds
- b. Support for increases in school budgets
- c. Donation of equipment and skilled personnel
- d. Assistance in curriculum development
- e. Aid in counseling and remedial education
- f. Establishment of new schools, running schools and school systems
- g. Assistance in the management and financing of colleges

C. EMPLOYMENT AND TRAINING

- a. Active recruitment of the disadvantaged
- b. Special functional training, remedial education, and counseling
- c. Provision of day-care centers for children of working mothers
- d. Improvement of work/career opportunities
- e. Retraining of workers affected by automation or other causes of joblessness
- f. Establishment of company programs to remove the hazards of old age and sickness
- g. Supporting where needed and appropriate the extension of government accident, unemployment, health and retirement systems

Source: Committee for Economic Development, Social Responsibilities of Business Corporations (New York: Committee for Economic Development, June 1971), pp. 37-40.

Table 7-6 (continued)

Spectrum of Business Activities to Improve Society

D. CIVIL RIGHTS AND EQUAL OPPORTUNITY

- a. Ensuring employment and advancement opportunities for minorities
- b. Facilitating equality of results by continued training and other special programs
- c. Supporting and aiding the improvement of black educational facilities, and special programs for blacks and other minorities in integrated institutions
- d. Encouraging adoption of open-housing ordinances
- e. Building plants and sales offices in the ghettos
- f. Providing financing and managerial assistance to minority enterprises, and participating with minorities in joint ventures.

E. URBAN RENEWAL AND DEVELOPMENT

- a. Leadership and financial support for city and regional planning and development
- b. Building or improving low-income housing
- c. Building shopping centers, new communities, new cities
- d. Improving transportation systems

F. POLLUTION ABATEMENT

- a. Installation of modern equipment
 - b. Engineering new facilities for minimum environmental effects
 - c. Research and technological development
 - d. Cooperating with municipalities in joint treatment facilities
 - e. Cooperating with local, state, regional and federal agencies in developing improved systems of environmental management
 - f. Developing more effective programs for recycling and reusing disposable materials
-

Table 7-6 (continued)

Spectrum of Business Activities to Improve Society

G. CONSERVATION AND RECREATION

- a. Augmenting the supply of replenishable resources, such as trees, with more productive species
- b. Preserving animal life and the ecology of forests and comparable areas
- c. Providing recreational and aesthetic facilities for public use
- d. Restoring aesthetically depleted properties such as strip mines
- e. Improving the yield of scarce materials and recycling to conserve the supply

H. CONSERVATION AND THE ARTS

- a. Direct financial support to art institutions and the performing arts
 - b. Development of indirect support as a business expense through gifts in kind, sponsoring artistic talent, and advertising
 - c. Participation on boards to give advice on legal, labor, and financial management problems
 - d. Helping secure government financial support for local or state arts councils and the National Endowment for the Arts
-

Table 7-6 (continued)

Spectrum of Business Activities to Improve Society

I. MEDICAL CARE

- a. Helping plan community health activities
- b. Designing and operating low-cost medical-care programs
- c. Designing and running new hospitals, clinics, and extended-care facilities
- d. Improving the administration and effectiveness of medical care
- e. Developing better systems for medical education (and) nurse's training
- f. Developing and supporting a better national system of health care

J. GOVERNMENT

- a. Helping improve management performance at all levels of government
 - b. Supporting adequate compensation and development programs for government executives and employees
 - c. Working for the modernization of the nation's governmental structure
 - d. Facilitating the reorganization of government to improve its responsiveness and performance
 - e. Advocating and supporting reforms in the election system and the legislative process
 - f. Designing programs to enhance the effectiveness of the civil services
 - g. Promoting reforms in the public welfare system, law enforcement, and other major governmental operations
-

Substantial percentages of the public consider the hiring and training of blacks and other disadvantaged people as a main responsibility. Likewise, they identify contributing money to support public education, health, and charities to be important functions of business. Slightly fewer expect business to help clean up and rebuild the ghettos in big cities.

A majority of the public thinks corporations have not been sufficiently concerned about the problems facing our society, and two-thirds believe business has a moral obligation to help other major institutions to achieve social progress, even if it means reduced profitability for the corporations providing such support.¹¹¹ The CED report notes that the public expects business to contribute more to realizing the goals of society, and indicates that public expectations may be described in terms of three concentric circles of responsibilities:

The inner circle includes the clear-cut basic responsibilities for the efficient execution of the economic function - products, jobs, and economic growth.

The intermediate circle encompasses responsibility to exercise this economic function with a sensitive awareness of changing social values and priorities: for example, with respect to environmental conservation; hiring and relations with employees; and more rigorous expectations of customers for information, fair treatment, and protection from injury.

The outer circle outlines newly emerging and still amorphous responsibilities that business should

¹¹¹Ibid., p. 15.

assume to become more broadly involved in actively improving the social environment. Society is beginning to turn to corporations for help with major social problems such as poverty and urban blight. 112

With such dissatisfaction with business performance and the range of expectations expressed, it is no wonder that business is beginning to look for some way to reflect its performance in these areas and to be able to show the public, particularly the investing public, how well it performs in relation to competitors engaged in fewer socially responsible activities. The real problem in developing some kind of social performance records has been the difficulty involved in measuring growth and profit by traditional balance sheets and profit-and-loss statements which do not present a full picture of what many corporations are attempting to do.

In a Wall Street Journal series dealing with the debate accompanying America's social upheaval of recent years, Frederick Andrews neatly drew the boundaries of the issue:

How, for instance, can a profit-and-loss statement be made to reflect the good a company does by assigning some of its personnel to advising minority businessmen struggling to succeed in a ghetto? How can the installation of pollution-control devices at a factory be shown on the bottom line as a positive accomplishment rather than a drag on productivity? How can the expense of hiring dropouts and putting them through company-financed training programs be reflected on the credit rather than the

112 Ibid.

debit side of the ledger?

Or, conversely, how can the "bad" a company does - whether it be through polluting or by discriminatory hiring practices - be measured and somehow reflected as a negative factor in the company's performance? ¹¹³

These are aspects of the need for some new version of the accounting equation which are at the heart of the pressures to develop social auditing as a viable new business practice. With this understanding of the social foundation of forces stimulating business toward social auditing, the discussion may now turn to a review of some of the efforts which have been made to actually perform a social audit.

7.4.3 Performing a Social Audit. There is some debate as to whether or not there really is even the barest outline of a theoretical base for conducting a social audit. A consultant noted for his work on the social role of business, Daniel H. Gray of Arthur D. Little, Inc., states flatly that "Social accounting doesn't exist."¹¹⁴ On the other hand, a biweekly newsletter, Business and Society, predicts that ratings of a company's "social performance" will eventually be as readily available as ratings of its credit worthiness.¹¹⁵

In the absence of any standard terminology or accepted practices, a firm is pretty much on its own to establish the

¹¹³Frederick Andrews, "Puzzled Businessmen Ponder New Methods of Measuring Success," Wall Street Journal, December 9, 1971, p. 1.

¹¹⁴Ibid.

¹¹⁵Ibid.

framework of accounting for its socially responsible activities. In a summary of its long-range plan for the decade of the seventies, Bank of America noted that:

...any corporation, and certainly any bank, must include some recognition of the health of the community it serves....In the period ahead, how well a corporation develops and deals with people--and how it adapts to meet change will become increasingly important in evaluating its future.

We expect to include such factors in our assessment of the potential performance of other companies, and we expect to be judged on the basis of such factors in the conduct of our own business.¹¹⁶

The bank report suggests that the most critical social issues "facing business are environment, inflation, cost of government, housing and basic sciences."¹¹⁷ In an effort to measure its social performance, Bank of America is attempting to develop what it calls "the arithmetic of quality,"¹¹⁸ which is essentially an approach involving an interdisciplinary effort to quantify a number of variables in cost-benefit terms.

Bank of America's approach is similar to the pioneer "cost-benefit" SA model which has been developed by Clark C. Abt, whose management consulting firm has performed a social audit in connection with its last two annual reports. The results of the SA have been included in the annual reports

¹¹⁶ John W. Day, "Closing the Credibility Gap in Environmental Control," Business Management, June 1971, p. 29.

¹¹⁷ Ibid.

¹¹⁸ Andrews, "Puzzled Businessmen," p. 1.

in the form of "social income statements" and "social balance sheets." The first such statements appeared in the 1971 report with comparative figures for 1970. For illustrative purposes, the 1972 annual report social statements are presented in Table 7-7 and Table 7-8. The notes supporting various entries are not, however, included here.

The basic approach employed by Abt was described in "extensions of remarks" in the Congressional Record by Congressman Thomas P. O'Neill, Jr. of Massachusetts, which is the state in which Abt's firm is located.¹¹⁹ Abt discussed the innovation in the President's remarks to stockholders. He noted that:

...Abt Associates Inc. has developed the Social Audit method of estimating in quantitative, dollar-equivalent terms the social benefits and costs and the social assets and liabilities of organizations....

...The basic concept used in the Social Audit to measure social benefits and costs to employees, communities, clients, and the general public is adopted from accounting practice. A thing is assumed to be worth what is paid for it, or what it costs, or the value received from it. This practice assumes all social impacts such as health, security, equality, environment, etc. can be expressed in terms of the money the people concerned have actually paid for the benefits or services, and what they have actually paid to avoid equivalent costs. 120

The approach followed by Abt has been criticized by Dilley, primarily on the benefit-cost analysis techniques

¹¹⁹U.S., Congress, House, Congressional Record, January 20, 1970, pp. E111-E112.

¹²⁰Clark C. Abt, Abt Associates Inc. Annual Report+Social Audit (Cambridge, Mass.: Abt Associates Inc., 1971), p. 6.

Table 7-7

360

Abt Associates Inc. - Social Balance Sheet
Year Ended December 31, 1972

Social Assets Available	
Staff	
Available within one year	\$ 4,166,125
Available after one year	12,566,700
Training investment	1,008,548
	<u>17,741,373</u>
Less Accumulated Training Obsolescence	247,541
Total Staff Assets	<u>17,493,832</u>
Organization	
Social Capital Investment	2,192,685
Retained Earnings	515,684
Land	307,430
Buildings at Cost	1,736,825
Equipment at Cost	136,638
Total Organization Assets	<u>4,889,262</u>
Research	
Proposals	37,898
Child Care Research	6,629
Social Audit	18,130
Public Services Consumed, Net of Tax Payments	160,514
Total Research and Tax Assets	<u>223,171</u>
Total Social Assets Available	<u>22,606,265</u>
Social Commitments, Obligations and Equity Staff	
Committed to Contracts within one year	29,451
Committed to Contracts after one year	88,836
Committed to Administration within one year	57,538
Committed to Administration after one year	173,558
Total Staff Commitments	<u>349,383</u>
Organization	
Financing Requirements	1,463,438
Facilities & Equipment Committed to Contracts and Administration	182,398
Total Organization Commitments	<u>1,645,836</u>
Environment	
Pollution from Paper Production	5,345
Pollution from Electric Power Production	41,451
Pollution from Automobile Commuting	20,130
Total Environmental Obligations	<u>66,926</u>
Total Commitments & Obligations	<u>2,062,145</u>
Society's Equity	
Contributed by Staff	17,144,449
Contributed by Stockholders	3,243,426
Generated by Operations	156,245
Total Equity	<u>20,544,120</u>
Total Commitments, Obligations and Equity	<u>\$22,606,265</u>

Source: Abt Associates Inc. Annual Report + Social Audit
(Cambridge, Mass.: Abt Associates Inc., 1972), pp. XIII-XIV.

Table 7-8

Abt Associates Inc. - Social Income Statement
Year Ended December 31, 1972

Social Benefits and Costs to Staff:	
Social Benefits to Staff:	
Health Insurance, Life Ins., Sick Leave	\$ 193,560
Career Advancement	331,872
Company School & Tuition Reimbursement	1,326
Vacation, Holidays, Recreation	304,932
Food Services, Child Care, Parking	122,305
Quality of Life (Space and its Quality)	84,268
Total Benefits to Staff	<u>1,038,263</u>
Social Costs to Staff:	
Layoff and Involuntary Terminations	14,849
Overtime Worked but Not Paid	882,721
Inequality of Opportunity	26,000
Total Costs to Staff	<u>923,570</u>
Net Social Income to Staff	<u>\$ 114,693</u>
Social Benefits and Costs to Community:	
Social Benefits to Community:	
Local Taxes Paid	\$ 71,352
Environmental Improvements	22,053
Local Tax Worth of Net Jobs Created	39,886
Total Benefits to Community	<u>133,291</u>
Social Costs to Community:	
Local Taxes Consumed	66,848
Net Social Income to Community:	<u>\$ 66,443</u>
Social Benefits and Costs to General Public:	
Social Benefits to General Public:	
Federal Taxes Paid	\$ 272,000
State Taxes Paid	61,750
Contributions to Knowledge (Publications, etc.)	17,700
Federal & State Tax Worth of Net Jobs Created	173,674
Total Benefits to Public:	<u>525,124</u>
Social Costs to General Public:	
Federal Services Consumed	128,880
State Services Consumed	46,368
Total Costs to Public:	<u>\$ 175,248</u>
Net Social Income to General Public:	<u>\$ 349,876</u>
Net Social Income to Staff, Community & Public:	<u>\$ 531,012</u>

Source: Abt Associates Inc. Annual Report + Social Audit
(Cambridge, Mass.: Abt Associates Inc., 1972), pp. XV-XVI.

employed. Dilley's challenge is as follows:

Benefit-cost analysis requires both the monetary cost and corresponding benefit from each activity to be calculated. In the Abt approach each activity has estimated social benefits equal to its cost. Thus with the Abt measurement technique all socially relevant activities would have a net present value of social benefits of zero and a benefit-cost ratio of one.

The Abt social income statement sidesteps this problem by regarding each activity as "good" or "bad." If the activity is "good," the money expended on it is a social benefit. If the activity is "bad," the amount of money expended on it (or imputed to it), would be a social cost. In this way, there are "social costs" to subtract from "social benefits" and "net social income" can be determined.¹²¹

Dilley develops a "Social Responsibility Annual Report" for a gas and electric company operating in the Midwestern United States in which he employs the traditional approach to benefit-cost analysis. Although this approach "results in much more difficult data gathering problems," he feels that it "provides more theoretically sound results."¹²²

Dilley's social responsibility annual report consists of the following nine elements: (1) an introductory statement, (2) a statement of company information, (3) a statement of community information, (4) an air pollution inventory statement, (5) a use of water resources statement, (6) a report on job safety, (7) a statement on minority (blacks, Indians, chicanos, females) employment, (8) a statement of funds flow for socially relevant activities, and (9) a statement of social benefits and costs from the company's operations.

¹²¹Dilley, "Accounting for Externalities," pp. 121-122.

¹²²Ibid., p. 122.

Although Fenn and Bauer acknowledge that the Abt version of a SA "represents a diligent and ingenious pioneering work," there are several reasons why they think the Abt "format is not the one most likely to be adopted by large, complex companies."¹²³

It does not appear to respond to the currently perceived needs of the executives of such organizations nor to the realities of their situations...

...The goal of the Abt audit, once again, is to render social performance in dollar terms in balance sheet form. Thus it does not disclose (it may even hide) the firm's performance in social programs in which its executives are interested....Our sense is that few companies are interested in supporting this last step of technical virtuosity if the information can meaningfully be presented in other ways.

Abt's audit is designed for external reporting. However, most executives are interested at this time in internal reporting for internal assessment. The prospect of external reporting exacerbates the already considerable anxiety of such executives.

Finally, the Abt form of a social audit is so abstract and complicated that we find few, if any, executives (never mind laymen) who claim to understand it as an overall entity -- nor do we feel we can explain it as a totality. ¹²⁴

These authors are basically skeptical of being able to express social consequences in dollar terms, and consider it premature to attempt to specify just what the final form of a SA should or will be. Instead, they believe that the immediate problem is to get management involved in efforts to develop meaningful analysis of social performance. Their suggestion is that initial efforts to conduct a SA should be confined to

¹²³Bauer and Fenn, "What Is a Corporate Social Audit?," p. 42.

¹²⁴Ibid., pp. 42-43.

providing information for internal use only, thus avoiding management resistance to such analysis through fear of embarrassment by disclosure.

They also suggest that a company focus its analysis on its programs rather than on an analysis of the overall social impact of the company. This involves two steps. First, the company needs to make a compilation of its "explicitly social programs," which, in almost every case, "will include the currently popular issues of pollution control, minority and female hiring, and promotion practices."¹²⁵ Second, the company must compile the cost and performance data associated with the various programs identified as socially relevant. It is argued that displaying information obtained in these two steps "will give a picture of the extent and nature of the resources committed thereto."¹²⁶ To the charge that this is little more than what is being done by many companies currently in their annual reports, Fenn and Bauer simply reply that there is:

...nothing wrong in a company's communicating the extent and nature of its social activities and the magnitude of effort behind those activities, provided the coverage is complete and the reporting honest....

Thus an honest and straightforward public reporting of what a company is doing, accompanied by the figures that are available, seems to us to be perfectly appropriate if public reporting is the name of the game. ¹²⁷

¹²⁵Ibid., p. 44.

¹²⁶Ibid., p. 45.

¹²⁶Ibid., pp. 45-46.

Regardless of the form and content which a SA may finally entail, the increased pressures by the public for more reporting on company practices is certain to stimulate further research in the area of quantifying qualitative impacts of company programs. This is clear from the range of interests which have thus far attempted to get a handle on meaningful measures of corporate social performance.

...Such groups as the Council on Economic Priorities, the National Council of Churches' Corporate Information Center, and the student-led Committee for Corporate Responsibility all have tried their hands at auditing individual companies' social performance in the areas of minority hiring, defense contracting, or pollution.

...A number of mutual funds, including the Dreyfus Third Century Fund, have been launched with the policy of investing only in what are deemed to be "socially responsible companies," based on the fund managers' assessment of social performance.

On the business front, management consultants such as Arthur D. Little, Inc., and Abt Associates, Inc., have been helping clients work on social audits, as well as undertaking the same kind of audit on their own companies....(T)he American Institute of Certified Public Accountants appointed an eight-man committee to help develop "standards and techniques for measuring, recording, reporting, and auditing social performance."

Many a top executive is intrigued, whether he sees it as a way of appeasing outside critics, of satisfying his own conscience and curiosity, or of guiding his company's decision-making. 128

7.4.4 Role of Environmental Assessments. The very nature of public judgments about corporate "social responsibility" makes it clear that environmental issues are among the fundamental items of interest to virtually all social critics

128, "The First Attempts at a Corporate 'Social Audit'," Business Week, September 23, 1972, p. 89.

of business. For whatever reason a company may be motivated to examine and report on its activities which have social impact, it must include consideration of its impact on the environment if it is to hope for the barest minimum of credibility.

This represents a retrospective consideration of the role of environmental assessment in corporate social auditing. A more important consideration, however, is the consideration of environmental values as part of the project planning phase of company development. This, as we have seen, is a requirement imposed on some companies under NEPA, and on others under various state laws. Other companies have adopted policies that environmental assessments must be made in connection with any capital improvement project. Perhaps the most notable case of such an approach is that followed by Dow Chemical Company. Dow, for example, has created an ecology council consisting of its chairman, president, three board members, and eight other committee members. The ecology council has taken a number of initiatives to protect environmental values. It has, for example:

- Decreed that every capital request identify pollution problems and their proposed solutions.
- Required research groups to file statements assessing the environmental impact of their projects. By sensitizing researchers early, Dow hopes to avoid problems later.

- Established (a) 23-man Environmental Research Laboratory to find ways of preventing waste or converting it to usable by-product. The lab does not consider waste treatment.

- Set up a panel, the Environmental Testing Advisory Board, that studies new products to minimize their ecological hazards. It also advises

industrial customers how best to dispose of Dow products, a concept...call(ed) "product stewardship." 129

The important point to be made here, however, is not whether environmental assessments are made retrospectively or in the early stages of the corporate decision making process, but that companies who are interested in reporting to the public the extent of their social commitments will need to develop the capability to assess the environmental impact of their activities. The EIS procedures employed by various agencies under NEPA serve, therefore, as convenient models for companies to follow in making such assessments. It is to be hoped, of course, that the examination of such agency practices which has been carried out in this study will add to the available fund of knowledge on which companies may draw in their ongoing movement toward wide spread use of social auditing.

7.5 Summary. This chapter was designed to illustrate the relationship of environmental management policies to three related areas of public concern. The related issues of "Technology Assessment," "Quality of Life" and "Social Auditing" have been discussed. It has been shown that environmental assessments are important elements of each of these three emerging concepts. A fundamental challenge in each case is the problem of developing meaningful measurements on which

¹²⁹"Dow Cleans Up Pollution at No Net Cost," Business Week, January 1, 1972, p. 35.

to base a decision for action or for reporting performance. This, of course, is a fundamental problem facing every agency in its environmental management obligation under NEPA. The experience and techniques of environmental assessment which agencies are accruing under the requirements of NEPA represent valuable guideposts for future improvements in all three of the related concepts examined in this chapter.

CHAPTER 8

CONCLUSIONS AND SUMMARY

8.1 Introduction. This study was undertaken to provide information for public and private sector administrators about aspects of environmental management arising from legal obligations imposed under the National Environmental Policy Act (NEPA). The research was initiated with the objective of obtaining and analyzing data relative to three major and three minor research objectives.

Specifically, it was determined to focus on the major objectives of providing information on the environmental impact statement (EIS) procedures of the Environmental Protection Agency (EPA), providing knowledge of the costs involved in the preparation of EIS's, and providing information about the nature of guidance needed by agencies in connection with "follow-up" responsibilities during project implementation. The secondary objectives involved analysis of the related subjects of Technology Assessment, quality of life (QOL) indicators, and social auditing. The major conclusions and, where appropriate, recommendations on each of these objectives are summarized following a brief summary

of background factors, which is presented in the next subsection below.

8.1.1 Background Factors. Chapter 5 provided a background for understanding the environmental management issues which were the objects of research in this study. The development of various theories of the environmental basis of society were traced from early anthropogeographic theories through religious theories to the modern ecosystem view which underlies the policies that are reflected in NEPA.

The legislative development of NEPA was traced, with emphasis on the political activity that was involved in reaching the compromise form of the final Act. The major provisions of the law were examined. Particular attention was devoted to its "action-forcing" provisions, which are represented by its EIS requirements, and to its provisions for establishment of the Council on Environmental Quality (CEQ). The analysis revealed that NEPA is essentially a Senate bill in respect to its policy and "action-forcing" provisions and a House bill in respect to its other provisions, especially the provisions pertaining to the CEQ. Detailed considerations of the EIS provisions were treated in Chapter 6 and are summarized in the next subsection below. The role and functions of the CEQ were examined in Chapter 5.

The analysis of the CEQ role showed that the Council has been granted broad environmental coordination responsibilities under NEPA and the Environmental Quality Improvement

Act. Its coordinating role was further strngthened by the President's NEPA-implementing directive to agencies. Council was shown to be a staff agency which serves in an advisory capacity to the President rather than an operating agency such as the Environmental Protection Agency.

The role and functions of EPA were also examined in Chapter 5, as was the Agency's relationship to the CEQ. It was shown that EPA was created as an independent regulatory agency which involved an amalgamation of then existing Federal programs dealing with air and water pollution, pesticides regulation, solid waste disposal, and environmental radiation. The Agency is an operating arm of the Executive branch of the government. It enjoys a close working relationship to the CEQ by virtue of the two agencies' primary interests in the environment, but it does not have a coordinating responsibility similar to that of the CEQ.

Further background factors included an analysis of the role of the courts in implementing NEPA and an examination of environmental policy developments at the state level. The analysis revealed that legal actions have been common under NEPA because of vagueness in the Act itself. For the most part, the courts have adopted a liberal interpretation of the intent of Congress, which has resulted in broad ranging decisions favoring environmentalists points of view.

The impact of the emerging concerns about energy policies were shown to have resulted in compromise strategies on the part of environmentalists, but it was concluded that it was too early to tell if the energy issues would result in a significant reformulation of Congressional policies toward the environment.

Thirteen states plus the Commonwealth of Puerto Rico were determined to have adopted environmental legislation or adopted executive orders which impose NEPA-style requirements for environmental assessments. The major variations in the state laws involve issues of which levels of government are affected and whether or not the regulations apply to private sector interests. A detailed analysis of the California law identified the nature of implementing problems which confront any state contemplating enactment of an EIS requirement. A common problem at the state level as well as the Federal level involves the nature of "follow-up" actions by agencies during project implementation to ensure protection of environmental values which were identified in the planning phase. This issue was examined in detail at the Federal level in Chapter 6, and a summary of the major findings and resulting policy recommendation is presented in the following section.

8.2 Agency "Follow-up" Procedures. One of the major objectives of this study was to determine what kind of policy guidance, if any, might be needed by agencies in connection

with their responsibilities during the project implementation phase. An hypothesis was formulated that agencies had not developed adequate procedural regulations to ensure protection of the environmental values identified in the EIS process. A survey of Federal agency practices in this regard was conducted and the results were analyzed in Chapter 6. These results are summarized in the two subsections which follow.

8.2.1 Fixing Responsibility. Ninety-one percent of the agencies surveyed acknowledged that the agency retains responsibility to "ensure that a project is implemented in accordance with provisions of the Final Impact Statement." The other nine percent were planning or advisory agencies which, in essence, review project plans to be implemented by other agencies. This finding of virtual unanimity by operating agencies on the issue of who has responsibility in this regard was found to be in conformity with a CEQ assumption that agencies recognized this responsibility. That assumption by the Council is only implied in its failure to address the issue in its guidelines, but was made quite explicit in correspondence associated with this study. It was concluded that agencies do in fact recognize that their environmental protection responsibilities extend beyond mere preparation of an EIS, but the critical question of whether their regulations adequately provided for fulfillment of such responsibility during project implementation involved further analysis, a summary of which is presented next.

8.2.2 Adequacy of Agency Regulations. Eighty-five percent of the agencies surveyed reported that "follow-up" was an integral facet of their operating regulations, but 57% of these failed to provide examples of such regulations to show how environmental issues identified in the EIS process were monitored during project implementation. Of the 43% of the agencies reporting integrated procedures which supplied samples of their regulations, only five contained specific reference in their NEPA directive to monitoring activities during project implementation.

Those five represented only 18% of all the agencies contacted, but were considered quite significant, nevertheless, because they collectively contributed more than 60% of the impact statements produced nationally at the Federal level through May 1972. It was found that the monitoring requirements of one of these five, the Department of Transportation, had not been incorporated into the NEPA implementing directive of its largest EIS-producing subdepartments. The Department of Transportation generated more than 57% of the EIS's, of which 85% were produced by the Federal Highway Administration. The FHA's output represented 49% of all EIS's nationally through May 1972, yet it had not incorporated the DOT monitoring requirement into its regulations, despite specific directions in the DOT regulation to do so.

In light of the analysis which generated the above findings, it was concluded that agencies had not developed

adequate policies and procedures with a sufficient degree of integration involving explicit monitoring and evaluation requirements to ensure that "provisions or conditions contained in their environmental impact statements are subsequently carried out."

8.2.3 Recommendations Concerning "Follow-up" Procedures.

The findings and conclusions summarized in the two previous subsections led to the formulation of a policy recommendation addressed to the Council on Environmental Quality. It was recommended that the CEQ issue instructions to all Federal agencies that would require them to develop as part of their NEPA procedures explicit rules or procedures for ensuring adequate agency supervision of activities during project implementation so that environmental values given attention during the planning phase receive appropriate attention in the on-going project. It was also recommended that the CEQ instructions encourage agencies to develop and use statistical sampling procedures to aid in monitoring compliance with environmental constraints.

This study facilitates implementation of these policy recommendations by identifying those agencies which collectively provide a model on which to develop adequate regulations to ensure appropriate "follow-up" activities.

8.3 EIS Procedures of the Environmental Protection Agency.

Another major objective of this study was to provide information on the environmental impact statement procedures

of the Environmental Protection Agency. This objective was accomplished in Chapter 6, where consideration was given to the Agency's regulations for the preparation of impact statements as well as to its procedures for review of impact statements prepared by other agencies.

EPA's procedures were examined in the light of the background factors discussed in Chapter 5 and in the light of a discussion of the CEQ guidelines in Chapter 6. As a practical matter, the Agency's procedures were subjected to scrutiny in connection with a proportionate sample analysis of EIS's prepared by various agencies in the Southeast. The findings on the impact statements drawn in the sample were compared in many cases with related data pertaining to statements prepared by EPA's Region IV staff. Counting the statements that were prepared by EPA, the analysis in Chapter 6 was based on a detailed study of thirty different impact statements.

8.3.1 EPA's Regulation for Preparation of EIS's. The Agency's NEPA directive was analyzed in detail and was found to generally satisfy the eight general requirements of such agency level regulations that are called for by the CEQ guidelines. EPA's regulations were considered to be especially strong in their treatment of procedures to be followed in connection with public involvement in the EIS process and in consulting with other agencies on project proposals. This

conclusion was substantiated by the findings from the analysis of sample impact statements in comparison to EPA's performance, which showed that EPA typically distributes its statements to more non-Federal agencies than other agencies in the Southeast. The conclusion was also borne out by the finding from the analysis of impact statements prepared by the Region IV staff of EPA, which showed that the Agency has held a public meeting on each of its EIS's developed in the Region.

EPA's regulation for the preparation of impact statements was determined to need minor revisions in connection with certain aspects of the required content of impact statements and with regard to the time to be allowed for other parties to comment on the draft statement.

It was concluded that, on the whole, EPA's NEPA directive represented an excellent model for other agencies to follow in bringing their regulations into full compliance with NEPA and the CEQ guidelines.

8.3.2 EPA Review of Other Agency EIS's. It was determined that EPA reviews virtually all of the impact statements that are prepared because of its mission-directed expertise in all areas of environmental concern and because of statutory obligations under the Clean Air Act. The Agency has developed an excellent manual which sets forth the procedures to be followed in reviewing other agency EIS's. An important element of the manual is the specification of criteria to be applied in rating EIS's prepared by other agencies and in

rating the projects which are analyzed in the EIS's.

These criteria were applied to the projects drawn in the sample and yielded findings which showed that EPA had no objections or only recommended minor changes to the projects in 65.2% of the cases. The Agency had reservations concerning the environmental effects of certain aspects of 30.4% of the projects. The remaining 4.4% was not rated because the EIS was rated inadequate and a basis did not, therefore, exist for determining the environmental impact of the project.

When the rating criteria were applied to the EIS's in the sample it was determined that in only 27.3% of the cases were agencies preparing adequate draft statements. In the remaining 72.7% of the cases agencies either needed to provide additional information in the final statement or needed to do a more thorough analysis of the impact of the proposed project or additional alternatives to the project.

The analysis of the sample statements using EPA's criteria involved a determination of the major deficiencies in the less than adequate statements. The development of a list of recurring deficiencies is considered to represent a major contribution of this study. Agencies may employ the list of common faults as a "check-list" in improving their future statements. To the extent that the findings of this study are made available to agencies submitting EIS's to the Region IV staff it is believed that overall improvements in other agency performance may be realized through review of the deficiencies identified in this study.

8.3.3 Other Aspects of Region IV Performance. In addition to the Agency practices highlighted in the two preceding subsections, it is appropriate to note several of the other findings about EPA's EIS program based on the analysis of impact statements in the region.

This study revealed that EPA's Region IV staff typically develops more detailed analyses of the environmental impacts of its proposed projects than other agencies in the region. It apparently devotes more effort in responding to reviewers comments as well. These findings are based on the determination that EPA's statements are longer at both the draft and final stages, involve a larger increase in size from draft to final stage, involve more man-hours of effort, and cost more than other agencies' statements.

Such findings lead to the conclusion that EPA's Region IV staff is doing a more conscientious job of complying with NEPA than other Federal agencies in the region. Such a conclusion leads to the recommendation that other agencies review their NEPA regulations in the light of the analysis of EPA's regulations provided here to see if they are encouraging regional level offices to consider all the factors which EPA takes into account. It may be that the basic policy directives do not indicate that a high level of performance is expected by all levels of the agencies concerned. As this analysis has shown, EPA's basic instruction calls for full compliance with all facets of NEPA and the supporting CEQ

guidelines.

8.3.4 Cost Findings. The final major objective of this study had to do with determining the cost of preparing an impact statement in order to assist in improving agency budget planning. Although the data is difficult to obtain in any degree of preciseness, this study was able to develop a comprehensive set of cost figures on statements prepared in the region. The analysis revealed that an average project in the Southeast costs a total of \$31,000. When the figure is applied to all statements produced in the region during the time period of this study it leads to the conclusion that implementation of the EIS preparation provisions of NEPA is costing in excess of seven million dollars annually. The figure is even higher, although by how much is unknown, when the costs of reviewing EIS's is added.

It is assumed that agency planners may be able to use this piece of information in conjunction with knowledge about the number of planned projects to improve their budget planning activities. Each agency would need to apply a correction factor based on its own experiences with price increases since 1972 in order to achieve time relevance in their planning.

8.4 Secondary Objectives. The three secondary objectives of this study were accomplished in Chapter 7 and entailed use of secondary data sources. In light of the secondary nature of these subjects and the fact that this study has not

entailed the development of primary data on any of them it is considered appropriate to limit consideration of them here to a few simple highlights of the analyses presented in Chapter 7.

8.4.1 Technology Assessment. The development of Federal legislation pertaining to the creation of an Office of Technology Assessment was presented. The nature of the Technology Assessment function was analyzed and it was shown that one facet of such an assessment is consideration of the environmental impacts of a proposed project. To that extent the concept is closely related to the issues which were developed in Chapters 5 and 6. From the standpoint of overall policy issues, it is clear that both NEPA and the Technology Assessment Act of 1972 are aimed at improving the quality of human existence. The former through enhancement of the quality of the human environment and the latter through attempts to forecast the whole range of political, economic, environmental, social, and institutional impacts of proposed actions. TA is viewed as broader in scope than the environmental assessment required under NEPA and it suggests concern with high-level policy considerations rather than individual agency projects. Nevertheless, it was shown that some action has been taken to foster support for TA at the state level.

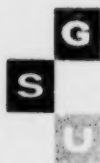
8.4.2 Quality of Life. The second major thrust of Chapter 7 was concerned with a consideration of current and

previous efforts to develop social indicators to measure the quality of life (QOL). It was shown that all such efforts involve consideration of environmental factors, but none have been successful in gaining broad acceptance of the measurement criteria. If any of the government's programs to achieve improvements in the quality of living are to be evaluated, however, the search must go on. It is a fundamental fact of system operation that the only way to gain control is to have identifiable goals to measure level of achievement. The determination of any goal related to quality of living involves the same kind of measurement process which so far has befuddled all researchers in the QOL area.

8.4.3 Social Auditing. The final aspect of this study involved an analysis of attempts to develop a social audit of business. The concept was shown to receive impetus from a desire by business to answer its social critics. Examples of attempts that have been made to develop a social report were presented, and the potential contributions of experience gained in making environmental assessments was cited. As in the case of TA and QOL, the inherent measurement problems represent difficult barriers to wide spread acceptance of any form of social audit.

8.5 Need for Further Study. Although this study accomplished its basic research objectives, part of the primary data was limited to one geographical region and had a relatively small sample proportion (21.1%) The same findings from a

replication of this study in other regions or on a national sample would strengthen the validity of this research.

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APPENDIX A**Letter to Federal Agency Officials**

April , 1973

Mr./Dr.

Washington, D.C.

Dear

Section 5(a)(ii) of the Council on Environmental Quality's Guidelines on "Statements on Proposed Federal Actions Affecting the Environment" is clear in noting that "Actions" subject to the 102(2)(C) requirements of the National Environmental Policy Act of 1969 (NEPA) include but are not limited to:

Projects and continuing activities: directly undertaken by Federal Agencies; supported in whole or in part through Federal contracts, grants, subsidies, loans, or other forms of funding assistance; involving a Federal lease, permit, license, certificate or other entitlement for use.

The Guidelines do not, however, indicate the "follow-up" action to be taken by agencies during the project implementation phase following a decision which has been reached in compliance with NEPA's 102 provisions.

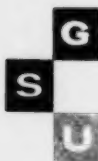
Would you please advise if your agency retains responsibility to ensure that a project is implemented in accordance with provisions of the Final Environmental Impact Statement, or is this a responsibility of the applicant/grantee in a given "Action?"

If retained as an agency responsibility, would you please provide me with a copy of your procedural instructions for "follow-up" actions to be taken to ensure compliance with the Final impact statement? If such compliance is the responsibility of the applicant/grantee, would you please provide me with a copy of the instructions given to the applicant/grantee as a condition of receiving the grant or license?

Thank you for your kind attention in this regard. I look forward to hearing from you at your earliest convenience.

Sincerely yours,

Donald R. Hudson
Instructor of Management

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APPENDIX B**Follow-up Letter to Federal Agency Officials**

May 24, 1973

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Dear -:

I am writing my doctoral dissertation here at Georgia State University on the subject of Environmental Management. The major focus of the study is on the Environmental Impact Statement process and the implementation procedures of Federal agencies.

Enclosed is a copy of my letter of April 25 to your office containing a request for information on the "follow-up" procedures which are employed by your agency during project implementation following a decision which has been reached in compliance with the section 102(2)(C) provisions of the National Environmental Policy Act of 1969.

It would help me greatly if you or an appropriate member of your staff could provide the information requested, and your cooperation in this regard will be appreciated.

Thank you for your consideration. I do look forward to your reply at your earliest convenience.

Sincerely yours,

Donald R. Hudson
Instructor of Management

DRH/kjf

Enclosure

APPENDIX C

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United States Water Resources Council
Suite 800
2120 L. Street, N.W.
Washington, D.C. 20037

APPENDIX D

Agency Written Replies to Appendix A

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Note: N/A = telephone replies.

ADVISORY COUNCIL
ON
HISTORIC PRESERVATION
WASHINGTON, D.C. 20240

392

June 7, 1973

Mr. Donald R. Hudson
Instructor of Management
Georgia State University
33 Gilmer Street, S.E.
Atlanta, Georgia 30303

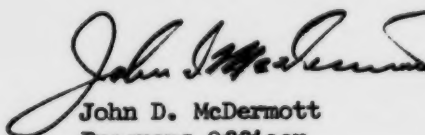
Dear Mr. Hudson:

In answer to your May 24 correspondence with this office, the Advisory Council on Historic Preservation currently has no procedures pertaining to a "follow up" on NEPA compliance. It is our policy to entrust such vigilance to the Council on Environmental Quality (CEQ) and the agencies involved.

I suggest that you query CEQ and the various Federal agencies concerned with NEPA as to the status of their "follow up" procedures for Section 102(2)(c).

I am sorry the Advisory Council could not be of more assistance to your project.

Sincerely yours,



John D. McDermott
Programs Officer

THE APPALACHIAN REGIONAL COMMISSION

1666 CONNECTICUT AVENUE
WASHINGTON, D.C. 20235

393

7 May 1973

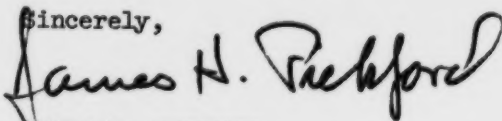
Mr. Donald R. Hudson
Instructor of Management
Georgia State University
33 Gilmer Street, S.E.
Atlanta, Georgia 30303

Dear Mr. Hudson:

In your letter of April 25, 1973 to Mr. Orville H. Lerch, you inquire whether the Appalachian Regional Commission retains responsibility to ensure that a project is implemented in accordance with provisions of the Final Environmental Impact Statement.

This responsibility resides in the applicant/grantee in a given "Action". The Commission does not issue any special instructions under these circumstances as a condition to receiving a grant. The instructions established pursuant to the grant determination and environmental impact statement process are those which the Commission expects to govern.

Sincerely,



JAMES H. PICKFORD
Director, Planning and
Development



UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

394

5/31/73

Mr. Donald R. Hudson
Instructor of Management
Georgia State University
33 Gilmer Street, S. E.
Atlanta, Georgia 30303

Dear Mr. Hudson:

It was nice talking to you today concerning your interest in AEC procedures for assuring that projects are implemented in accordance with statements made in Final Environmental Statements.

Enclosed are the copies of 10 CFR Parts 50 and 100 and the "Guide for Preparation of Environmental Reports for Nuclear Power Plants" that I promised you.

As soon as we have a "Guide for Preparation of Environmental Technical Specifications for Nuclear Power Plants" or other materials that may interest you, I will send you copies.

Sincerely,

B. L. Harless, Staff Assistant
to the Assistant Director for
Environmental Projects
Directorate of Licensing

Enclosures:
10 CFR Parts 50 and 100
"Guide for Preparation of
Environmental Reports for
Nuclear Power Plants"



JAMES F. WRIGHT
EXECUTIVE DIRECTOR

DELAWARE RIVER BASIN COMMISSION
P. O. BOX 360
TRENTON, NEW JERSEY 08603

(609) 883-9500

395

HEADQUARTERS LOCATION
25 STATE POLICE DRIVE
WEST TRENTON, N. J.

May 3, 1973

Mr. Donald R. Hudson
Instructor of Management
Georgia State University
33 Gilmer St., S. E.
Atlanta, Georgia 30303

Dear Mr. Hudson:

I have your letter of April 25 inquiring as to followup action by this Commission to determine if implementation of projects conforms to the provisions of an environmental impact statement.

This Commission reviews a large number of diverse types of water resource projects. Some of these are required to go through the EIS procedure in accordance with NEPA, while others are not. The attached copy of the Commission's Rules will give you an indication of the kinds of projects we deal with and the categories that have been determined to be subject to an EIS.

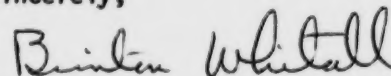
Commission decisions on all projects are contained in dockets, a sample of which is enclosed. These dockets usually contain certain conditions which must be met by the applicant, and this is true whether or not the project is subject to an EIS. Sometimes the conditions are extensive and directed at particular features of the project, and at other times they are somewhat routine, standard requirements. The process of preparing an EIS will sometimes bring to light certain aspects of a project which require special conditions in the Commission's docket decision.

We do not have sufficient staff to undertake surveillance of all projects to determine whether they are being constructed in accordance with the terms and conditions of the Commission's approval. There are literally several hundred project actions every year and it would require substantial staff resources to monitor all of them. Our inability to provide full monitoring service applies as much to projects requiring an EIS as to those that do not. Upon occasion, the Commission has been made aware of the failure of an applicant to live up to the terms and conditions set forth in the Commission's docket, and we have taken followup action in such cases. However, the Commission has usually learned of these cases as a result of special circumstances rather than by routine staff followup as an organized program activity.

Mr. Donald R. Hudson
May 3, 1973
page 2

It is the responsibility of the applicant to comply with the terms and conditions contained in the permit. This is true whether or not the project involved is subject to an EIS. Finally, we do not have any procedural instructions for followup actions to be taken by the project sponsor.

Sincerely,

A handwritten signature in cursive script, reading "Brinton Whittall".

W. Brinton Whittall
Secretary

WB:WGW
enc.



DEPARTMENT OF AGRICULTURE
OFFICE OF THE SECRETARY
WASHINGTON, D. C. 20250

397

JUN 19 1973

Dr. Donald R. Hudson
Instructor of Management
Georgia State University
33 Gilmer Street, S.E.
Atlanta, Georgia 30303

Dear Dr. Hudson:

In response to your letter of April 25 to Dr. T. C. Byerly,
enclosed are responses from the following Agencies of this
Department:

Cooperative State Research Service
Rural Electrification Administration
Soil Conservation Service
Animal and Plant Health Inspection Service
Agricultural Research Service
Forest Service
Agricultural Stabilization and Conservation Service

Other Agencies of the Department have no need or only a rare need
to prepare environmental statements.

Sincerely,

A handwritten signature in dark ink, appearing to read "F. H. Tschirley", is written over the typed name.

FRED H. TSCHIRLEY
Acting Coordinator
Environmental Quality Activities

Enclosures

UNITED STATES DEPARTMENT OF AGRICULTURE
COOPERATIVE STATE RESEARCH SERVICE
WASHINGTON, D.C. 20250

398

OFFICE OF THE ADMINISTRATOR

May 3, 1973

SUBJECT: Monitoring Implementation of Actions Requiring
Environmental Impact Statements

TO: T. C. Byerly

In CSRS funded research, projects requiring an EIS are not authorized for expenditure until a final EIS is on file. Following that commitment, the grantee assumes responsibility for conduct of the work in essential agreement with the proposed plan. Any substantive deviations from the plan require approval. CSRS also provides periodic monitoring through onsite review of research at the institutions.

No formal guidelines for such monitoring have been issued.



J. S. ROBINS
Associate Administrator

UNITED STATES DEPARTMENT OF AGRICULTURE
RURAL ELECTRIFICATION ADMINISTRATION
WASHINGTON, D.C. 20250

399

May 4, 1973

SUBJECT: Monitoring Implementation of Actions for Which
Environmental Impact Statements Have Been Submitted

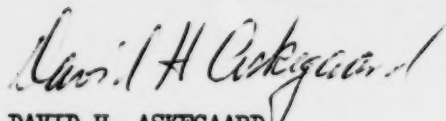
TO: T. C. Byerly, Coordinator
Environmental Quality Activities

In response to your memorandum of April 30, 1973, we have outlined below REA's procedure for monitoring compliance with final environmental statements. When CEQ's proposed revised guidelines are finalized, REA intends to amend its present Staff Instruction for implementing NEPA requirements, to include these procedures.

The U. S. Department of Agriculture, in its guidelines for preparing environmental statements required by Section 102 (2) (C) of NEPA, requires its individual agencies to include in their procedures provisions for monitoring to assure agency compliance with the requirements under NEPA.

The Rural Electrification Administration is responsible for ensuring that its borrowers comply with the commitments in the final environmental statements. REA engineers review plans and specifications for proposed construction to ensure that the commitments made in the final environmental statement have been adequately covered. During and upon completion of construction, REA engineers and the borrower's engineers are responsible for monitoring the construction to ensure compliance with plans and specifications and the environmental statement commitments.

In addition to the review described above, enforcement of air and water quality standards is the specific responsibility of Federal, State, and local agencies, which are authorized to develop and enforce environmental standards. Such agencies in every case which significantly affects air or water quality receive copies of the final environmental statements and therefore have full knowledge of all environmental commitments.



DAVID H. ASKEGAARD
Director, Office of Program
Development and Analysis

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

400

Washington, D. C. 20250

SUBJECT: Monitoring Implementation of Actions for Which
Environmental Impact Statements Have Been Submitted

DATE: May 7, 1973

TO: T. C. Byerly, Coordinator
Environmental Quality Activities

Reference is made to your April 30, 1973 memorandum and attached letter from Donald R. Hudson, Georgia State University requesting guidelines used to determine if watershed projects are implemented in accordance with the provisions of the final environmental impact statement. Soil Conservation Service procedures are applicable to watershed projects developed under Public Law 78-534 and Public Law 83-566.

Watershed work plans are developed in cooperation with other interested state and federal agencies. An environmental statement is prepared concurrently with each plan stating effects of proposed plans on the environment. The environmental impact statement is used to analyze and describe the project's impact. Project details, however, are contained in the watershed work plan.

Prior to approving a watershed work plan and authorizing federal assistance for installation of works of improvement, the organizations sponsoring the watershed project sign a Watershed Work Plan Agreement. The Agreement is executed between the sponsoring local organization and the Department of Agriculture. Both parties agree to install the project in accordance with the work plan. The sponsoring local organization also agrees to operate and maintain the works of improvement after installation. At the time of executing the Watershed Work Plan Agreement, the responsible Soil Conservation Service official certifies as follows:

"Appropriate and careful consideration has been given to the environmental statement prepared for this project and to the environmental aspects thereof".

The installation of watershed projects is carefully monitored to assure compliance with the work plan. Detailed construction drawings and specifications are either prepared by or reviewed and approved by SCS. All construction work is rigidly inspected by SCS to insure that completed works comply with approved plans and specifications.

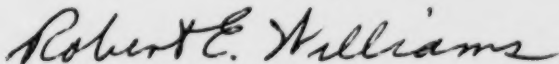


T. C. Byerly

2

Prior to issuing an invitation to bid on construction work for watershed works of improvement, the sponsors sign an Operation and Maintenance Agreement with SCS. The sponsoring local organization agrees to operate and maintain the completed work. For a minimum of three years after construction, the sponsors and SCS inspect the work at least annually to determine items requiring attention. The sponsors continue to inspect the project indefinitely and submit reports to SCS regarding actions taken.

In summary, the watershed program is a joint "cost-shared" activity rather than a "grant" program. We work directly with the local agencies throughout the planning, design, and construction phases, and for at least three years after construction. Sample copies of a Watershed Work Plan Agreement and one on Operation and Maintenance Agreement are enclosed.



Robert E. Williams
Assistant to the Administrator
for Environmental Development

Enclosures:

WPH 113.08 - 1 thru 7 (Work Plan Agr.)
2300, Exhibit A (O&M)

UNITED STATES DEPARTMENT OF AGRICULTURE
ANIMAL AND PLANT HEALTH INSPECTION SERVICE
WASHINGTON, D. C. 20250

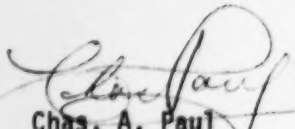
402

MAY 9 1973

Subject: Monitoring Implementation of Actions for which
Environmental Impact Statements have been
Submitted

To: T. C. Byerly, Coordinator
Environmental Quality Activities

We have no applicant-grantee relationship which requires an impact statement prepared by APHIS or the grantee and which would require monitoring or supervising by anyone other than this agency. In all previous environmental involvement, APHIS has provided such supervision.


Chas. A. Paul
Special Projects Officer

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL RESEARCH SERVICE
WASHINGTON, D.C. 20250

403

May 9, 1973

Subject: Monitoring the Implementation of Actions for Which
Environmental Impact Statements Have Been Submitted

To: T. C. Byerly
Coordinator
Environmental Quality Activities

Through: T. W. Edminster
Administrator 

With reference to Mr. Hudson's letter of April 25 and your memorandum of April 30, we advise that ARS has no formal documentation processes for followup action during the project implementation phase.

Followup action, however, is inherent to our review process, since projects (whether research or construction) are designed to conform to their final environmental impact statements. We have construction inspections and periodic project reviews that will bring about corrective action in the same manner as discrepancies in other facets of the project activity are corrected.



R. E. Yeck
Acting Assistant Administrator
National Program Staff

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
Washington, DC 20250

404

REPLY TO: 1940 Environmental Statements

MAY 14 1973

SUBJECT: Monitoring Implementation of Actions for Which
Environmental Impact Statements Have Been Submitted

TO: T. C. Byerly, Coordinator
Environmental Quality Activities, USDA



This is in response to Mr. Hudson's inquiry regarding monitoring implementation of action for which environmental impact statements have been submitted.

In most instances, the Forest Service retains full responsibility to insure that a project is implemented in accordance with provisions of the environmental statement. However, in certain cooperative state programs such as insect control program, the State assumes responsibility to insure that the program is carried out in accordance with the environmental statement. Attached is a cooperative agreement and work plan that illustrates this type situation.

Also attached is a copy of Forest Service instructions on environmental statements. Section 1943.5 addresses Execution, Monitoring, and Evaluation.

PHILIP L. THORNTON
Deputy Chief

Enclosures

Jun 6 1973

COPY

Agricultural Stabilization and Conservation Service

TO Fred Tschirley, Assistant Coordinator
Environmental Quality Activities

SUBJECT: Monitoring Implementation of Actions for Which
Environmental Impact Statements have been Submitted

This is in reference to the request from Dr. Byerly in which he enclosed correspondence from Donald R. Hudson, Georgia State University, relative to the above subject.

The Agricultural Stabilization and Conservation Service (ASCS) administers various commodity and land use programs designed for voluntary production adjustment, resource protection, and price, market and farm income stabilization. It has a committee system which serves in every agricultural county and community in the 50 States. The farmer members of the county committee are elected for a 3-year period on a rotation basis. The farmer members of the State committee are appointed by the Secretary. The county extension agent and the State Extension Director are members ex-officio of the respective committees.

The ASCS guidelines for preparation of environmental statements do not provide for follow-up action on projects covered by an environmental statement or individual farms participating under program environmental statements. This matter is covered by the agency guidelines for program participation.

Participants in programs administered by this agency are required to carry out such participation based on agreements or contracts entered into with him by the county ASC committee on behalf of the Secretary. These agreements or contracts carry specific regulations and/or relate to the regulations issued for the program.

Compliance with such agreements or contracts is reviewed at various times as follows:

1. By the county committees under guidelines furnished by the Washington offices for each individual program and overall ASCS guidelines for determining program compliance. A copy of a portion of these guidelines are enclosed as attachment A.

Fred Tschirley, Assistant Coordinator

2. State office spot check. A copy of these guidelines are enclosed as attachment B.
3. Review by the office of the Inspector General of county office operations including a review of some farms.
4. Periodic reviews by the General Accounting Office.

We believe that the compliance system which this agency has been using for a number of years assists in assuring that farmers carry out program participation in accordance with program procedures on which an environmental statement has been issued.

Ray Hunter, ASCS Member
Environmental Quality Executive Committee

Attachments

cc: AS6S:6LW:Sallee:3615S.
ASCS:CLU Division:3096S.

ASCS:CLUD:WOSallee/clo/ext. 74491/6-6-73/CLU-6379



OFFICE OF THE ASSISTANT SECRETARY OF COMMERCE
Washington, D.C. 20230

407

May 7, 1973

Mr. Donald R. Hudson
Instructor of Management
Georgia State University
33 Gilmer Street, S.E.
Atlanta, Georgia 30303

Dear Mr. Hudson:

This is in reply to your letter of April 25, 1973, in regard to follow-up responsibility on environmental impact statements. This type of action would generally occur in relation to EIS's prepared by our Economic Development Administration. They do incorporate such follow-up in their grant or loan supervision process either as a special condition to construction contracts or as part of the pre-construction monitoring of projects.

Your interest in the environment is appreciated.

Sincerely,

Sidney R. Galler
Sidney R. Galler
Deputy Assistant Secretary
for Environmental Affairs



HEALTH AND
ENVIRONMENT

ASSISTANT SECRETARY OF DEFENSE
WASHINGTON, D. C. 20301

408

23 MAY 1973

Mr. Donald R. Hudson
Instructor of Management
Georgia State University
33 Gilmer Street, S.E.
Atlanta, Georgia 30303

Dear Mr. Hudson:

The following information is provided in response to your letter of April 25, 1973. An environmental assessment for proposed major actions is prepared prior to making a decision. If the proposed action is appropriate and approved, various constraints generated by the assessment are included in the outgrant instrument. Periodic checks are made to insure compliance.

I hope this information adequately answers your inquiry.

Sincerely,

George W. Milias
Director for
Environmental Quality



HEALTH AND
ENVIRONMENT

ASSISTANT SECRETARY OF DEFENSE
WASHINGTON, D. C. 20301

409

8 JUN 1973

Mr. Donald R. Hudson
Instructor of Management
Georgia State University
33 Gilmer Street S. E.
Atlanta, Georgia 30303

Dear Mr. Hudson:

The following information is provided in response to your letter of 24 May 1973 in which you requested clarification on who is responsible for making periodic checks to insure compliance of outgrants.

It is the responsibility of the authorizing agency to insure compliance with the terms of the outgrant. The requirement is stipulated in numerous directives and is considered a standard management practice.

I trust this information will adequately answer your question.

Sincerely,

George W. Milias
Director for
Environmental Quality



DEPARTMENT OF THE ARMY
OFFICE OF THE CHIEF OF ENGINEERS
WASHINGTON, D.C. 20314

410

IN REPLY REFER TO

DAEN-CWP-V

5 July 1973

Mr. Donald R. Hudson
Instructor of Management
Georgia State University
33 Gilmer Street S. E.
Atlanta, Georgia 30303

Dear Mr. Hudson:

This is in response to your letters of 25 April and 24 May 1973 addressed to former Executive Director of Civil Works, Colonel J. B. Newman, requesting information on responsibilities for "follow-up" actions on Corps construction and permit activities.

Corps of Engineers "follow-up" actions are based upon provisions in the planning decision document or certain restrictions or conditions identified in the permit application which are obligatory upon the non-Federal interest providing assurances of cooperation or upon the permittee. These documents accompany draft and final environmental impact statements through the Corps review process and provide a sound basis for the final decision on the proposed action. If the "follow-up" actions impact significantly on the environment, a thorough discussion of post-construction activities and the affected party's responsibilities for meeting these objectives will be included in the environmental impact statement. To insure compliance, completed projects or permit actions are inspected annually by representatives of the Corps and the affected local entity.

In accordance with your request, I am inclosing a sample contract form which is substantially followed for all local assurance agreements. Also inclosed for your information is a copy of the Corps proposed regulations concerning "Permits for Activities in Navigable Waters or Ocean Waters" published in the Federal Register (38 F. R. 12217, 10 May 1973) and a copy of our Engineer Regulation No. 1105-2-507, "Preparation and Coordination of Environmental Statements," dated 16 February 1973.

411

DAEN-CWP-V
Mr. Donald R. Hudson

5 July 1973

Your interest in the environmental program and related activities
of the Corps of Engineers is appreciated.

Sincerely,



H. L. SARGENT
Colonel, Corps of Engineers
Executive Director of Civil Works

3 Incl
As stated



DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, D. C. 20410

412

OFFICE OF THE ASSISTANT SECRETARY FOR
COMMUNITY PLANNING AND MANAGEMENT

IN REPLY REFER TO:

Community and Environmental Standards

JUL 13 1973

Mr. Donald R. Hudson
Instructor of Management
Georgia State University
33 Gilmer Street, S. E.
Atlanta, Georgia 30303

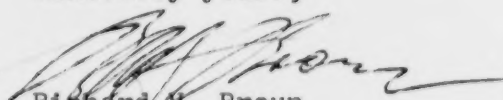
Dear Mr. Hudson:

This is in reply to your request for information concerning HUD policy for "follow-up" action to be taken during project implementation phase in accordance with the Final Environmental Impact Statement. In the recently approved HUD Handbook outlining the Department's responsibilities under NEPA, the section dealing with Action Resulting from EIS reads as follows: "Where benefits of the proposal outweigh environmental costs, processing may proceed; conditions or safeguards found to be necessary in order to protect and enhance environmental quality or minimize adverse environmental impacts shall be set forth in the contract, grant, or comparable document..."

As our environmental policy has very recently been issued, we do not know at this point the nature and degree of follow-up activity resulting from the above statement. Follow-up activity, however, is the subject of evaluation of environmental activities taking place within the Department. The results should be available by the end of this calendar year.

If I can provide you with any additional information, please let me know.

Sincerely yours,


Richard H. Broun
Acting Director

This supplements our recent telephone conversation.

RRB



United States Department of the Interior

413

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

JUN 1 1973

Dear Mr. Hudson:

In response to your request of April 25, 1973, it is a bit difficult to answer your specific question since the Department of the Interior has scores of programs with many different procedures for each Bureau and/or Office. However, as a typical example of Departmental responsibilities, the following information is given on the Bureau of Outdoor Recreation's grants-in-aid program.

Environmental statements are not prepared for every grants project. Environmental assessments are prepared for each one, however, and the Bureau then makes a decision on a case-by-case basis as to whether or not an environmental statement will be prepared.

Every project, whether or not an environmental statement is prepared, is carefully scrutinized to assure that adverse environmental impacts will be precluded or mitigated before project approval and implementation.

Every project has prepared for it a project agreement (contract) which spells out, in both general and special provisions, who is responsible for various actions associated with the project. These provisions are supplemented by additional guidance in the Bureau's manual.

Thus all grants projects, whether or not an environmental statement is involved, are subject to a series of checks and inspections to assure project objectives. One objective of every project is high quality outdoor recreation experiences in a quality environment. Responsibility for assuring project objectives is shared by the Bureau and the States.

In its grants program, the Bureau and the States share the responsibility for follow-up to assure that the completed project fulfills its outdoor recreation purposes and objectives. This shared responsibility is discharged in three ways:

- 1) The Bureau evaluates each project proposal (before approval) to assure that basic criteria, including criteria relating to environmental factors, are met. In this regard, guidance is contained in 660BOR2.2H (Enclosure #1). When the governing guidelines are not met, the applicant modifies the proposed project to the Bureau's satisfaction or the proposed project is not approved. Thus the objectives of NEPA are basically met at the earliest stages of project submission and approval.
- 2) Project administration (implementation) is the responsibility of the States (Enclosure #2). During construction the State is responsible, through periodic inspections, to assure that construction practices do not needlessly degrade environmental quality.
- 3) Once a project is completed, an inspection must be conducted by the State at least once every three years and an inspection report submitted to the Bureau. Environmental quality at the project site is a point specifically considered in the post-completion inspections (Enclosure #3).

Project agreements, supplemented by additional policy and procedural guidance (see Enclosures) are the major basis for follow-up on grants projects. Where an environmental statement has been prepared for a project, it is taken into account by the Bureau to assure that compliance with stated project objectives is met.

Should you wish to pursue this matter further, I would suggest that you contact the Regional Director of the Bureau of Outdoor Recreation, Mr. Robert M. Baker, 810 New Walton Building, Atlanta, Georgia 30303; telephone 526-4405.

I hope this information will be of assistance to you in the preparation of your doctoral dissertation.

Sincerely yours,



Bruce Blanchard, Director
Environmental Project Review

Mr. Donald R. Hudson
Instructor of Management
Georgia State University
33 Gilmer Street, S.E.
Atlanta, Georgia 30303



DEPARTMENT OF STATE

Washington, D.C. 20520

415

BUREAU OF INTERNATIONAL SCIENTIFIC &
TECHNOLOGICAL AFFAIRS

May 16, 1973

Mr. Donald R. Hudson
Instructor of Management
Georgia State University
33 Gilmer St., S.E.
Atlanta, Georgia 30303

Dear Mr. Hudson:

This refers to your letter of April 25, 1973 to Mr. Herter in which you inquired about the follow-up action the State Department takes to assure compliance with the terms of the environmental impact statements it prepares.

The State Department has not issued any specific instructions relating to the follow-up of environmental impact statements although it is our policy to try to assure, where practicable, that the activities for which we are responsible are carried out in compliance with the expectations reflected in those statements that we prepare.

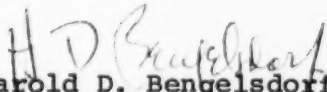
It should be noted that to date the Department of State has circulated three impact statements to the public. Two of these concerned conventions that are specifically designed to ameliorate international environmental problems. I am referring specifically to the international Convention on Liability and Compensations for Oil Pollution Damage and the Convention on Prevention of Marine Pollution by Dumping of Wastes and Other Matter. Under the terms of these agreements the United States is expected to assume some continuing obligations designed to reduce certain pollution problems. Hence in fulfilling its treaty obligations the U.S., in essence, also will be fulfilling

the expectations reflected in the environmental impact statements that were prepared as background as part of our decision making processes.

In the third case a pipeline designed to carry highly volatile liquid hydrocarbons into the United States from Canada was the subject of one of our impact statements since the line necessitated a State Department boundary crossing permit and we judged that it could have significant environmental effects. In this particular case our review included an evaluation of whether the line would be constructed and operated safely in compliance with all applicable federal regulations. Moreover, subsequent to the preparation of the impact statement the permit that was issued to the pipeline company obliged the company to comply with the pertinent safety regulations issued by the Department of Transportation. It is our understanding that under the terms of these regulations the Department of Transportation has certain rights to inspect such lines to assure that they comply with the terms of its regulations. Thus, in this case the implementing federal regulations will help assure, to some degree, that the project will be executed in compliance with the expectations reflected in the environmental assessment.

I hope this letter is responsive to your questions. Please do not hesitate to contact us further should you have any other questions.

Sincerely yours,


Harold D. Bengelsdorf
Office of Environmental
Affairs

COMPLIMENTS OF:

**Martin Convisser
Director
Office of Environmental Affairs
Environment, Safety, and Consumer Affairs
Office of the Secretary, Department of Transportation
400 Seventh Street, S.W., Room 9422
Washington, D. C. 20590**



OFFICE OF THE SECRETARY OF THE TREASURY
WASHINGTON, D.C. 20220

418

MAY 7 1973

Dear Mr. Hudson:

Mr. Richard E. Slitor, who was the Environmental Quality Officer for the Department, has retired from the Federal service and your letter of April 25 was forwarded to this office.

This Department does not administer programs in which the applicant/grantee status referred to in your letter exists. In fact, of the approximately ten environmental impact statements filed to date by the components of the Department on a variety of subjects, none was of the type involved in your inquiry.

Sincerely yours,

Stanley D. Allen
Stanley D. Allen, Chief
Management Analysis Division

Mr. Donald R. Hudson
Instructor of Management
Georgia State University
33 Gilmer Street, S. E.
Atlanta, Georgia 30303



OFFICE OF THE SECRETARY OF THE TREASURY
WASHINGTON, D.C. 20220

419

JUN 4 1973

Dear Mr. Hudson:

This is in response to your letter of May 24. This Department has issued no special regulations concerning follow-up on environmental aspects during the implementation of any action for which the Department has filed environmental impact statements with the Council on Environmental Quality.

We fully appreciate, however, that the filing of environmental impact statements with CEQ and the subsequent decision to take some proposed action carries with it the obligation to fulfill any terms and conditions of the particular statement. Such obligation normally falls within the assigned duties of the responsible Program Manager.

Good luck with your dissertation and we look forward to receiving our copy.

Sincerely yours,

Stanley D. Allen
Chief, Management Analysis Division

Mr. Donald R. Hudson
Instructor of Management
Georgia State University
33 Gilmer Street, S. E.
Atlanta, Georgia 30303

ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

420

29 JUN 1973

OFFICE OF THE
ADMINISTRATOR

Mr. Donald R. Hudson
Instructor of Management
Georgia State University
33 Gilmer Street, S.E.
Atlanta, Georgia 30303

Dear Mr. Hudson:

This is in response to your letter of April 25, 1973, concerning how agencies follow-up after complying with NEPA to ensure that a project is implemented in accordance with provisions in the final environmental impact statement (EIS).

With regard to the review of EIS's, EPA does not retain the responsibility to "follow-up" on proposed projects we have reviewed. Our review authority is derived from section 102(2)(C) of NEPA and section 309(a)(2) of the Clean Air Act, which limits our review to major Federal actions for which EIS's have been prepared by Federal agencies sponsoring the actions. With respect to our responsibilities under section 309(b) of the Clean Air Act, however, we have initiated the review of certain final EIS's to consider whether a proposed action is unsatisfactory from the standpoint of health, welfare, or environmental quality and therefore must be referred to CEQ. Our procedures for the review of draft and final EIS's are contained in EPA Order 1640.1, enclosed herewith.

Although EPA is not prohibited from following up on projects to see if changes discussed in the final EIS in response to our comments were actually incorporated in the project, resource limitations prohibit this agency from implementing such a follow-up procedure on a regular basis. We will follow-up, however, on certain very special projects such as the Alaskan pipeline. In addition, our discharge permit responsibilities gives us an opportunity to follow-up, at least in the water quality area, on nuclear and other power plants, which often require such permits. Similarly, although CEQ has general oversight responsibility for the NEPA process, its limited resources

Page 2 - Mr. Donald R. Hudson

prevent it from following up in all but a few cases where the public calls its attention to a problem. Clearly, if the NEPA process is to work, it requires the Federal agencies participating in it to do what they say they will do.

Of course EPA should follow up on any actions it is responsible for. We do this automatically in our grant and contract programs. Continual monitoring of a contract ensures the contractor meets all requirements including those resulting from any EIS that was prepared on the project. In the construction grants program, our regional offices must make a final inspection. Any requirements imposed by an EIS can be checked at that time. Provisions in our grant regulations give us substantial authority to induce a grantee to comply.

I hope I have been able to answer your questions satisfactorily. If I can be of any further assistance, please do not hesitate to contact me.

Sincerely yours,

Rebecca W. Hammer

for Sheldon Meyers
Director
Office of Federal Activities

Enclosure

FEDERAL COMMUNICATIONS COMMISSION

WASHINGTON, D.C. 20554

June 11, 1973

422

IN REPLY REFER TO:

3300

Mr. Donald R. Hudson
Instructor of Management
Georgia State University
33 Gilmer Street, S.E.
Atlanta, Georgia 30303

Dear Mr. Hudson:

This is in response to your letter of April 25, 1973 to Chairman Burch concerning responsibility for ensuring that a project is implemented in accordance with the provisions of a final environmental impact statement.

To place your inquiry in perspective, it should be noted that, though the Commission has given consideration to the environmental consequences of its actions, it has not to this point concluded that any action taken would have a significant effect on the quality of the human environment. Thus, no environmental impact statements have been prepared.

This is not to say that the construction of communications facilities authorized by the Commission cannot have significant environmental effect or that impact statements will not be prepared in the future. However, if such a statement is prepared, it will be limited to an assessment of the environmental consequences of a project and of feasible alternatives. It would not contain conclusions as to whether a project should be authorized or directions for its construction. Conclusions concerning grant or denial of an application would be set out in the Commission's decision, made after preparation of the impact statement. Directions regarding construction would be set out in the decision or in the construction permit.

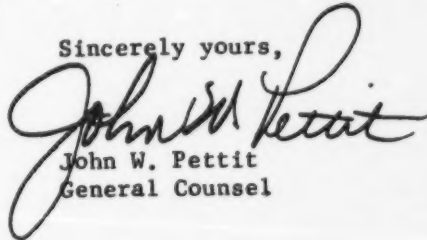
The question of "follow up" actions to ensure proper implementation of an action would thus relate to implementing terms of the construction permit rather than an environmental impact statement. The permittee is responsible for constructing the facilities in accordance with the terms of the permit. The Commission may make an on-site inspection but does not attempt to supervise construction activity. When the project is completed, the permittee applies for operating authority and must at this point be able to show that construction has been carried out in accordance with the terms of the permit.

Mr. Donald R. Hudson

2.
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We rely primarily on representations made in the application for operating authority and view very seriously any deviation in such representations from a high standard of honesty and candor. Operating authority may be denied if the facilities do not conform to the permit or on the basis of misrepresentations by the applicant.

Sincerely yours,



John W. Pettit
General Counsel

FEDERAL TRADE COMMISSION
WASHINGTON, D. C. 20580

424

OFFICE OF THE SECRETARY

May 8, 1973

Re: Corres. No. 057942

Mr. Donald R. Hudson
Georgia State University
33 Gilmer Street S. E.
Atlanta, Georgia 30303

Dear Mr. Hudson:

This will acknowledge your recent letter describing information on the National Environmental Policy Act.

Because it appears that the matter concerning which you write may be more appropriately considered by the Environment Protection Agency, we have referred your letter to that agency.

Very truly yours,

Catherine O. Abbott

Catherine O. Abbott
Assistant to the Secretary

cc: Environmental Protection Agency
401 M Street S. W.
Washington, D. C. 20460

EXECUTIVE OFFICE OF THE PRESIDENT
COUNCIL ON ENVIRONMENTAL QUALITY
722 JACKSON PLACE, N. W.
WASHINGTON, D. C. 20006

425

JUN 19 1973

Ms. Catherine O. Abbott
Assistant to the Secretary
Federal Trade Commission
Washington, D.C. 20580

Dear Ms. Abbott:

On April 25, 1973, Mr. Donald R. Hudson of Georgia State University wrote the Federal Trade Commission to inquire about your agency's policy concerning "follow-up" action to ensure that projects are implemented in accordance with provisions of an agency's environmental impact statement. Mr. Hudson's letter was subsequently referred to the Council on Environmental Quality.

In our view Mr. Hudson's inquiry deserves a response from the Federal Trade Commission. While the Council's guidelines describe the procedures for preparing environmental impact statements, and thus do not discuss the "follow-up" issue, we would assume that agencies retain responsibility to ensure that provisions or conditions contained in their environmental impact statements are subsequently carried out. If this does not conform with your agency's view, we would like to be so informed.

I am returning Mr. Hudson's original letter and am sending him a copy of this letter. Could you please send a copy of your response to Mr. Hudson to the Council on Environmental Quality.

Sincerely,

(Signed) Timothy Atkeson

Timothy Atkeson
General Counsel

cc: Mr. Donald R. Hudson

FEDERAL TRADE COMMISSION
WASHINGTON, D. C. 20580

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OFFICE OF THE GENERAL COUNSEL

NOV 23 1973

Mr. Donald R. Hudson
Instructor of Management
Georgia State University
33 Gilmer Street, S.E.
Atlanta, Georgia 30303

Dear Mr. Hudson:

This is in response to your letters of April 25, and May 21, 1973, requesting information concerning this agency's "follow-up" procedures under the National Environmental Policy Act, once an Environmental Impact Statement has been prepared pursuant to § 102(2)(C) of that Act. I apologize for the long delay in responding.

The Commission has as yet had no occasion to issue an Environmental Impact Statement, since § 102(2)(C) does not apply to law enforcement investigations or adjudicatory proceedings, which form the bulk of the Commission's work. That section is applicable, however, to legislative proposals or reports, as well as to the Commission's promulgation of Rules and Guides. The Commission has issued both formal Rules and internal procedures for guidance to the staff in dealing with these matters as they arise. For your information, I have enclosed copies of the Commission's Rules of Practice and Procedure, Sections 1.81 - 1.85, and also the Office of General Counsel and operating bureau guidelines applicable to legislation and to preparation of Rules and Guides.

There can be no true "follow-up" by the Commission of legislative proposals and reports, since the enactment of legislation is not within the control of the Commission, but rather of Congress. However, in order to comply with NEPA to the greatest extent possible, the procedures dealing with legislation provide for the preparation of draft statements to accompany and be considered with any proposals and reports forwarded to Congress.

Mr. Donald R. Hudson

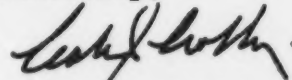
-2-

In the event legislation were enacted which gave the Commission specific responsibilities, it would then evaluate its new activities by the standards set out in the Rules of Practice and the operating bureau procedures.

As to Rules and Guides, however, the procedures for the Bureaus of Competition and Consumer Protection, Section 5, provide that the Bureau Director is to review annually any Rule or Guide originally accompanied by an environmental impact statement, such review to begin three years after promulgation of the Rule or Guide, or earlier if there has been a significant change either in the Rule or Guide or in the affected environment.

I hope this information has been of assistance to you. If I may be of further help, please do not hesitate to contact me.

Sincerely,



Calvin J. Collier
General Counsel

Enclosures

UNITED STATES OF AMERICA
GENERAL SERVICES ADMINISTRATION
WASHINGTON, DC 20405



428

MAY 9 1973

Mr. Donald R. Hudson
Instructor of Management
Georgia State University
33 Gilmer Street, S. E.
Atlanta, Georgia 30303

Dear Mr. Hudson:

Thank you for your April 25 letter to Mr. Rod Kreger regarding "follow-up actions" to be taken by federal agencies after compliance with the 102 provisions of the National Environmental Policy Act.

As you probably know the environmental impact statement process and NEPA in general are still in their infancy, despite the fact that great numbers of statements are being produced by the agencies. Environmental statements are just beginning to be widely viewed as an important step in the decisionmaking process--the intended end product of NEPA--and not just another administration requirement.

We believe that GSA is not only complying with the statutory requirements of NEPA, but also with the spirit of the Act. To that end we are not only fulfilling the submission requirements for environmental impact statements, but also beginning activities designed to predict and evaluate the environmental impact of our actions. We are also attempting to generate broader interest in environmental decisionmaking among professionals and have held a GSA International Environmental Conference on Building Construction and Use to foster these ends. This Conference resulted in the requirement that on GSA construction projects, the contractor must designate a member of his staff as Environmental Control Officer, who is functionally responsible for compliance by the contractor with environmental standards.

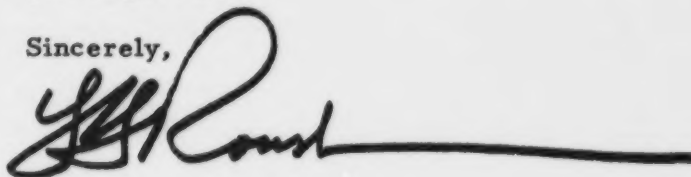
In addition the Conference also recommended a GSA review of the site selection process 2 to 5 years after project completion and a 1-year occupancy evaluation study and report to determine the validity of our actions. These processes, which are discussed in the enclosed booklet,

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seem to tie in with the "follow-up" issue you mention in your inquiry, and represent for us a beginning in the direction of your expressed interests.

I hope this information has been of assistance and would appreciate hearing about any other "follow-up" activities you hear or suggestions you might have.

Sincerely,

A handwritten signature in dark ink, appearing to read "L. F. Roush", followed by a long horizontal line extending to the right.

LARRY F. ROUSH
Acting Deputy Administrator
for Special Projects

Enclosure

Interstate Commerce Commission

Washington, D.C. 20423

430

OFFICE OF THE CHAIRMAN

May 4, 1973

Mr. Donald R. Hudson
Georgia State University
33 Gilmer Street, S. E.
Atlanta, Georgia 30303

Dear Mr. Hudson:

This replies to your letter of April 25, 1973, concerning this Commission's procedures to ensure the public that persons subject to our regulatory jurisdiction are complying with any findings we might make in final impact statements that we issue pursuant to the requirements of the National Environmental Policy Act of 1969 (NEPA).

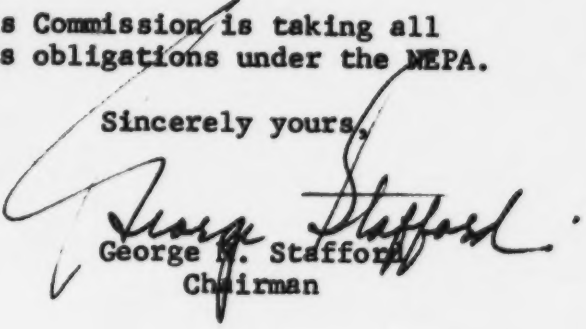
This Commission regulates the surface transportation of property and passengers in interstate and foreign commerce. Effective regulation requires the constant examination of the industries we oversee and the continuous reevaluation of the extent to which those persons subject to our jurisdiction are complying with the governing statutes (including the NEPA), the rules and regulations promulgated by us to implement those statutory purposes (our environmental regulations are set forth at 49 CFR 1100.250), and the orders and other directives of this Commission. There are, however, only an extremely limited number of Commission actions that may be found to be major Federal actions significantly affecting the quality of our human environment, and few, if any, of these may be said to be of the "project" variety to which your letter appears primarily directed.

We nevertheless have attempted to implement the NEPA so that it has become an integral part of our decision-making process. Environmental assessments, reports, or impact statements are usually incorporated by reference into an accompanying order of this Commission. As with all matters which receive

our attention, however, the decision is only a part of our regulatory responsibilities. Our staff keeps a watchful eye on the transportation situation to assure compliance with our orders and to recommend new courses of action should changing circumstances so warrant. Because the NEPA has been so finely interwoven into our existing regulatory fabric, no additional regulations have been promulgated relating to "follow-up" actions on final environmental impact statement decisions.

It is my belief that this Commission is taking all necessary steps to fulfill its obligations under the NEPA.

Sincerely yours,



George M. Stafford
Chairman



NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

WASHINGTON, D.C. 20546

432

REPLY TO
ATTN OF:

PA

May 9, 1973

Mr. Donald R. Hudson
Instructor of Management
Georgia State University
33 Gilmer Street, SE.
Atlanta, GA 30303

Dear Mr. Hudson:

This will respond to your letter of April 25, 1973, to Dr. Fletcher regarding follow-up actions to ensure that a project is implemented in accordance with provisions of its Final Environmental Impact Statement.

As you correctly note, the current Council on Environmental Quality Guidelines do not require a follow-up of this nature. Consequently, the NASA regulations (copy enclosed) governing our compliance with the NEPA and the CEQ Guidelines do not address this subject explicitly. However, our project management processes require adherence to approved project plans, whether the project is carried out in house or on contract. Proposed changes in project scope or content of a substantive nature require documentation and NASA approval; if these changes were likely to modify the environmental impacts in a significant way, they would come under the reassessment provision of our own regulation (paragraph 6a).

Sincerely,

A handwritten signature in cursive script, reading "Nathaniel B. Cohen", is written over the typed name.

Nathaniel B. Cohen
Director, Office of Policy Analysis

Enclosure

NATIONAL CAPITAL PLANNING COMMISSION

WASHINGTON, D.C. 20576

433

IN REPLY REFER TO:

NCPC File No. 0735 & 1200

MAY 17 1973

Mr. Donald R. Hudson
Instructor of Management
Georgia State University
33 Gilmer Street, S.E.
Atlanta, Georgia 30303

Dear Mr. Hudson:

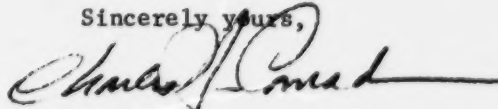
In response to your recent inquiry, please be advised that the Commission does not "follow up" on the actions to be taken by Federal agencies during the implementation of proposed developments within the National Capital Region.

As the central physical planning agency for the Federal Government in the National Capital Region, the Commission reviews the planning, design and environmental impact of proposed Federal developments. However, it has no funding, inspection, or regulatory responsibilities regarding implementation. If a sponsoring agency revises its final plans in the course of construction, it is required to resubmit the revised plans to the Commission. However, once completed, the Commission has no responsibilities governing the operation of the facility unless the agency subsequently wishes to enlarge or modify the facility.

The Commission is a unique Federal planning agency whose jurisdiction is limited to the National Capital Region, which roughly corresponds to the Washington metropolitan area. There is no comparable Federal planning agency anywhere else in the United States and, therefore, the situation in this region is unique.

If you have any further questions, we will be glad to try and answer them.

Sincerely yours,



Charles H. Conrad
Executive Director



From the Office of the
Executive Director

434

SUSQUEHANNA RIVER BASIN COMMISSION

5012 Lenker Street

Mechanicsburg, Pennsylvania 17055

June 6, 1973

Mr. Donald R. Hudson
Instructor of Management
Georgia State University
33 Gilmer Street, S.E.
Atlanta, Georgia 30303

Dear Mr. Hudson:

We are in receipt of your inquiry of May 24, 1973, to Alan Sommerville regarding follow-up procedures employed on projects approved for implementation under NEPA.

The Commission does not have projects underway that required NEPA review. Quite frankly I am surprised Mr. Sommerville forwarded your letter to us as his agency, Pennsylvania Department of Environmental Resources, does have a number of projects underway that are covered by 102 provisions.

Very truly yours,

Robert J. Bielo
Executive Director

COMMONWEALTH OF PENNSYLVANIA



435

DEPARTMENT OF ENVIRONMENTAL RESOURCES

P. O. BOX 1467

HARRISBURG, PENNSYLVANIA 17120

June 1, 1973

Mr. Donald R. Hudson
Instructor of Management
Georgia State University
33 Gilmer Street, S. E.
Atlanta, Georgia 30303

Dear Mr. Hudson:

In response to your letter of May 24, 1973, requesting information in connection with your doctoral dissertation on the subject of Environmental Management, please be advised that the time my name appeared in the Federal Register in connection with the Susquehanna River Basin Commission, I had been designated to handle the affairs of the new Commission on a temporary basis until such time as an executive director could be selected.

Accordingly, I am forwarding your letter to Mr. Robert J. Bielo, Executive Director, Susquehanna River Basin Commission, West Shore Office Center, 5012 Lenker Street, Mechanicsburg, Pennsylvania, 17055, for reply.

Sincerely yours,

A handwritten signature in cursive script, reading "Alan J. Sommerville".

Alan J. Sommerville
Water Resources Coordinator

**TENNESSEE VALLEY AUTHORITY
CHATTANOOGA, TENNESSEE
37401**

436



June 21, 1973

Dr. Donald R. Hudson
Instructor of Management
Georgia State University
33 Gilmer Street, SE.
Atlanta, Georgia 30303

Dear Dr. Hudson:

This is in response to your letters of April 25 and May 24, 1973, requesting information on the "follow-up" procedures which are employed by TVA during project implementation following a decision which has been reached in compliance with the Section 102(2)(c) provisions of the National Environmental Policy Act of 1969.

The Tennessee Valley Authority retains responsibility to ensure that a project is implemented in accordance with provisions of its final environmental impact statements.

The Board of Directors determines TVA policies relating to programs for protection and enhancement of environmental quality and to major TVA actions described in draft and final environmental statements.

The General Manager coordinates implementation of the policy, approves and issues supplemental procedures, and ensures agency compliance with stated plans included in the draft and final environmental statements.

The Division of Environmental Planning has primary responsibility for "follow-up" action.

In cooperation with other interested TVA offices and divisions, the Division of Environmental Planning recommends to the General Manager supplemental procedures as may be necessary to ensure implementation.

In cooperation with interested offices and divisions, it plans, formulates, and recommends policies and programs relating to implementation of protection and enhancement of the environment. In so doing, the division:

1. Collaborates with other offices and divisions in considering the environmental implications of major actions implemented by TVA;

Dr. Donald R. Hudson

June 21, 1973

2. Provides technical guidance and assistance to other TVA offices and divisions in implementing the environmental aspects of their activities;
3. Maintains liaison with CEQ concerning identification and development of methods and procedures of implementation;
4. Makes available advice and information useful in restoring, maintaining, and enhancing the quality of the environment;
5. Initiates and coordinates the utilization of ecological information in development of resource-oriented projects;
6. Monitors, conducts primary research on, and assesses actual impact of TVA actions on environmental quality.

Offices and divisions carry out responsibilities assigned to them in accordance with procedures issued by the General Manager, notify the Division of Environmental Planning of scheduled actions, request technical guidance and assistance, conduct onsite reviews, discuss results of monitoring, and initiate any required corrective or enhancement action resulting from periodic monitoring discussions.

We hope this information will be useful to you in your work.

Sincerely yours,


F. E. Gartrell, Dr. P. H.
Director of Environmental
Planning

Enclosures: TVA Organization Chart
Organization Bulletin, I ENVIRONMENTAL PLANNING



438

UNITED STATES WATER RESOURCES COUNCIL

SUITE 800 • 2120 L STREET, N.W. WASHINGTON, D.C. 20037

MAY 14 1973

Mr. Donald R. Hudson
Instructor of Management
Georgia State University
33 Gilmer Street, S. E.
Atlanta, Georgia 30303

Dear Mr. Hudson:

Reference is made to your letter of April 25, 1973, regarding Council on Environmental Quality guidelines on "Statements on Proposed Federal Actions Affecting the Environment." The guidelines are presently being revised (copy of Federal Register, Volume 38, Number 84, enclosed).

The Water Resources Council (WRC) has responsibility for conducting comprehensive water and related land resources planning activities including preparation of broad national assessments and regional or river basin plans. The objectives and scope of the Council's comprehensive planning activities are described in Policy Statement No. 1, enclosed. Recommended actions and programs identified in such plans are implemented by individual Federal, State and local entities. The implementing actions are reviewed by the Council for consistency in areas which have approved regional or river basin plans.

Policy Statement No. 2, enclosed, establishes Council policy regarding implementation of Section 102(2)(C) of P. L. 91-190 for the Council's comprehensive planning program. This statement identifies the responsible entities for preparing environmental statements and provides guidelines for statement preparation for the different levels of planning.

MEMBERS: SECRETARIES OF INTERIOR; AGRICULTURE; ARMY; HEALTH, EDUCATION AND WELFARE; TRANSPORTATION;
CHAIRMAN: FEDERAL POWER COMMISSION - ASSOCIATE MEMBERS: SECRETARIES OF COMMERCE; HOUSING AND URBAN
DEVELOPMENT; ADMINISTRATOR, ENVIRONMENTAL PROTECTION AGENCY - OBSERVERS: DIRECTOR, OFFICE OF MANAGEMENT
AND BUDGET; ATTORNEY GENERAL; CHAIRMEN - COUNCIL ON ENVIRONMENTAL QUALITY; RIVER BASIN COMMISSIONS

Policy Statement No. 3, also enclosed, sets forth the policy of the Council regarding the initiation, development and submission of, and WRC action on, proposed revisions of completed regional or river basin plans. Reports proposing major revision to the completed plan shall be accompanied by a draft environmental statement as set forth in WRC Policy Statement No. 2.

In addition, although Federal agencies have limited discretionary powers to adjust plans when implementing such plans, generally the authorization for the plan precludes major revisions of an approved project without additional review and/or authorization procedures or actions. If major changes are considered involving reauthorization, of course, revised environmental statements would also need to be prepared. Also, implementation of plans is frequently closely reviewed by Congress during the appropriations process.

Thus, for most agency programs the final assurances that implementation actions are carried out in accordance with approved plans rests in the authorization arrangements and precedents in regard to discretionary powers of the agency head to adjust plans applicable to that program, along with the review of the programs carried out in the appropriations process.

Sincerely yours,


Reuben J. Johnson
Acting Director

Enclosures

APPENDIX E

Environmental Impact Statements Analyzed

EIS No.	Source and Title of Statement	Date of Draft EIS	Date of Final EIS
Corps of Engineers:			
1.	Flood Control Levee Dyersburg, Tennessee	4/12/71	1/24/72
2.	Miami Harbor Miami, Florida	11/12/71	5/26/72
3.	Edinburg Dam and Lake Pearl River Basin Mississippi and Louisiana	5/16/72	9/20/72
4.	Beach Restoration Bal Harbor, Florida	3/13/72	11/ 3/72
Department of Agriculture:			
5.	Soil Conservation Service Hollow Creek Watershed Lexington and Saluda Counties South Carolina	10/ 6/71	12/10/71
6.	Forest Service Cooperative 1972 Gypsy Moth Suppression and Regulating Program Multi-state Project	1/ 3/72	3/15/72
7.	Rural Electrification Administration Electric Generating Station Unit No. 1 Maysville, Kentucky	5/13/72	9/25/72
Department of Transportation:			
Federal Aviation Administration			
8.	Rockingham County Airport Rockingham, North Carolina	10/18/71	3/13/72

EIS No.	Source and Title of Statement	Date of Draft EIS	Date of Final EIS
Federal Aviation Administration (continued)			
9.	Ashe County Airport West Jefferson, North Carolina	2/ 4/72	4/ 6/72
10.	Holly Springs-Marshall County Airport Holly Springs, Mississippi	3/10/72	5/ 3/72
11.	Plymouth Municipal Airport Plymouth, North Carolina	5/10/72	7/19/72
Federal Highway Administration			
12.	Canal Bridge State Job No. 48540-3625 Escambia County, Florida	?	2/ 4/72
13.	Heckle By-pass York County Rock Hill, South Carolina	2/ 8/72	4/17/72
14.	U.S. 231 Project F-125; FAP 127 Daviness County, Kentucky	8/30/71	4/28/72
15.	F-026-2(13) F-105-1(6) F-119-1(1) Ware County, Georgia	7/20/71	6/14/72
16.	Proposed Highway I-40 Project 8.1475201 FA I-40-4(5)(268) Wake-Johnston Counties North Carolina	7/--/71	7/26/72
17.	Project F-248(11) Shelby and Talladega Counties Alabama	11/29/71	9/ 8/72
18.	U.S. 280 Project S-28-E and F-349(2) Tallapoosa and Coosa Counties Alabama	6/ 9/72	12/13/72

EIS No.	Source and Title of Statement	Date of Draft EIS	Date of Final EIS
	U.S. Coast Guard		
19.	Proposed Fossil Fuel Ash Slurry Pipeline Bridge Across the Edisto River Near Canadys Colleton County, South Carolina	4/25/72	8/30/72
	Atomic Energy Commission		
20.	Oconee Nuclear Power Station Units 1, 2, and 3 Oconee County, South Carolina	12/13/71	3/24/72
	Department of Housing and Urban Development		
21.	Proposed New Community Harbison, South Carolina	3/23/72	5/26/72
	Tennessee Valley Authority		
22.	Rehabilitation of the Nolichucky Project Greene County, Tennessee	12/10/71	3/10/72
23.	Browns Ferry Nuclear Plant Units 1-3 Limestone County, Alabama	7/14/71	9/ 1/72
	Environmental Protection Agency		
24.	Cobb County Sewerage Improvement Project Cobb County, Georgia	4/--/71	7/--/71
25.	Palm Beach County Sewerage Project Palm Beach, Florida	10/ 6/71	12/20/72
26.	Ocean Outfalls and Other Disposal Methods Generic Statement Multi-state Applications	12/20/72	3/19/73
27.	North Broward County Sewerage Improvement Project Broward County, Florida	12/31/72	3/20/73

EIS No.	Source and Title of Statement	Date of Draft EIS	Date of Final EIS
Environmental Protection Agency (continued)			
28.	Sope Creek Sewerage Improvement Project Cobb County, Georgia	2/--/73	4/ 2/73
29.	Sewerage Improvement Project Hollywood, Florida	4/ 9/73	9/ 4/73
30.	Sewerage Improvement Project Fort Lauderdale, Florida	4/18/73	6/29/73

APPENDIX F

Environmental Impact Statement Data Sheet

PART I - EIS DATA

1. Project Identification.

1.1 EPA Log-Week of: _____

1.2 HQS Control No.: _____

1.3 Date of EIS: _____

1.4 Title of EIS (including project no., if any): _____

_____1.5 Originating Agency: _____

1.6 Agency 3-digit Code: _____

1.7 Project Location: _____

County City State2. Characteristics of Project at Draft Stage.

2.1 Estimated Cost of Completed Project: \$ _____

2.2 Stage of Project Development: _____

- 1 - early planning
- 2 - advanced planning
- 3 - construction begun
- 4 - construction 50% completed
- 5 - construction substantially completed

2.3 Type of Project _____

2.4 Project Rating (LO, ER, or EU): _____

LO - Lack of Objections.

EPA has no objections to the proposed action as described in the draft impact statement; or suggests only minor changes in the proposed action.

ER - Environmental Reservations/Major Changes Necessary.

EPA believes the proposed action needs major revisions to adequately protect the environment, and as a result, has substantial reservations on all or parts of the proposed action.

EU - Environmentally Unsatisfactory.

EPA believes that the proposed action is unsatisfactory because of its potentially harmful effect on the environment. Furthermore, the Agency believes that the potential safeguards which might be utilized may not adequately protect the environment from hazards arising from this action. The Agency recommends that alternatives to the action be analyzed further (including the possibility of no action at all).

3. Characteristics of EIS at the Draft Stage.

3.1 Date of Draft EIS: _____

3.2 Length of EIS: _____

3.3 Codes of Agencies Receiving EIS for Comment (Circle):

AEC	DOA	FDA	IBW	NSF	STA
AFH	DOC	FHW	ICC	OCR	TVA
AFS	DOD	FPC	IGS	OEH	TRE
ARC	DOI	FTC	JUS	OST	UAF
ASC	DOT	GSA	MAR	OSW	UMT
BIA	DRB	HEW	NAS	PHS	USA
BLM	EDA	HSM	NER	REA	USN
BOR	EPA	HUD	NIH	SCS	VAD
CGD	FAA	IBM	NOA	SFW	WRC
COE	FCC	IBR	NPS	SMI	

Other _____

3.4 Rating of Adequacy of EIS (1, 2, or 3): _____

Category 1 - Adequate.

The draft statement adequately sets forth the environmental impact of the proposed project or action and alternatives reasonably available to the project or action.

Category 2 - Insufficient Information.

EPA believes that the draft impact statement does not contain adequate information to assess fully the environmental effects of the proposed project or action. However, from the information submitted, the agency is able to make a preliminary determination of the impact on the environment. EPA has requested that the originator provide the information that was not stated in the draft statement.

Category 3 - Inadequate.

EPA believes that the draft impact statement does not adequately assess the environmental impact of the proposed action, or that the statement inadequately analyzes reasonably available alternatives. The agency has requested more information and analysis concerning the potential environmental hazards and has asked that substantial revisions be made to the impact statement.

3.5 Public Announcement of EIS Availability Made? _____

3.6 If yes, how and when was it made? _____

3.7 EIS Project Coordinator Identified? _____

3.8 If yes, list particulars. _____

3.9 Public Hearings Held? _____

3.10 If yes, when and where held? _____

3.11 Were transcripts of Public Hearings made? _____

3.12 If yes, where may they be seen? _____

3.13 Was a Cost-Benefit Analysis Made? _____

3.14 If yes, who made the analysis? (staff, consultant,
combination?) _____

3.15 Summarize the environmental impacts of the proposed
action. _____

3.16 Summarize the adverse environmental effects _____

3.17 Summarize the alternatives to the proposed action.

3.18 Summarize relationship between local and short-term
uses of man's environment and the maintenance of
long-term productivity. _____

3.19 Summarize any irreversible and irretrievable commitments of resources involved in the proposed actions. _____

3.20 Was EIS prepared by internal staff or applicant?

3.21 In either case, were outside consultants used? _____

3.22 If yes, give particulars. _____

4. Characteristics of Project at Final Stage.

4.1 Estimated Cost of Completed Project: \$ _____

4.2 If different than amount in 2.1, give full particulars: _____

4.3 Project rating (LO, ER, or EU): _____

4.4 List and provide page numbers of those problems identified in the comment letter on the draft EIS which may have contributed to project changes either partially or fully in response to EPA's criticism.

- 4.5 List and provide page numbers of those alternatives suggested in the comment letter on the draft EIS which were adopted by the agency.

- 4.6 Are there other changes that do not fall into either of the above categories that may be attributed to the comment letter? Explain: _____

5. Characteristics of EIS at Final Stage.

- 5.1 Length of Final EIS: _____

- 5.2 Codes of Agencies Submitting Comments (Circle):

AEC	DOA	FDA	IBW	NSF	STA
AFH	DOC	FHW	ICC	OCR	TVA
AFS	DOD	FPC	IGS	OEH	TRE
ARC	DOI	FTC	JUS	OST	UAF
ASC	DOT	GSA	MAR	OSW	UMT
BIA	DRB	HEW	NAS	PHS	USA
BLM	EDA	HSM	NER	REA	USN
BOR	EPA	HUD	NIH	SCS	VAD
CGD	FAA	IBM	NOA	SFW	WRC
COE	FCC	IBR	NPS	SMI	

Other _____

5.3 Number of comments by individual agency circled above: _____

5.4 Rating of Adequacy of EIS (1, 2, or 3): _____

5.5 List and provide page numbers of those problems identified in the comment letter on the draft EIS which were adequately responded to in the final EIS.

5.6 List and provide page numbers of those alternatives suggested in the comment letter on the draft EIS which were adequately considered or analyzed in the final EIS.

5.7 Are there any "conditions" given in EIS as basis for granting applicant's license, permit, or grant? _____

5.8 If yes, describe: _____

PART II - ORIGINATING AGENCY RESOURCES DATA

6. Interview Identification.

6.1 Date of Interview _____

6.2 Name and Title of Agency Official: _____

_____6.3 Describe Interviewee's role in preparation of
subject EIS: _____

_____7. Agency Resources Allocated to This EIS.7.1 How many professional man-days or man-years
do you estimate were employed on the Draft
EIS? _____ Final? _____7.2 Can you identify the individuals who were primarily
involved in preparing this EIS? _____7.3 If yes, describe the educational qualifications
of each. _____

- 7.4 If yes to 7.2, describe the experience background of individuals involved in preparation of this EIS. (include G-S rating)

- 7.5 If Job Descriptions of personnel concerned are available, obtain one copy of each: _____

- 7.6 Interviewee's estimates of Agency's costs for:

7.6.1 Field Studies: Draft\$ _____ Final\$ _____

7.6.2 Consultants: Draft\$ _____ Final\$ _____

7.6.3 Travel Expenses: Draft\$ _____ Final\$ _____

7.6.4 Printing Costs: Draft\$ _____ Final\$ _____

7.6.5 Other (explain):

Draft\$ _____

Final\$ _____

7.6.6 Total Costs: Draft\$ _____ Final\$ _____

Grand Total: _____

- 7.7 Describe Agency's Staff Structure for EIS's _____

- 7.8 Describe Agency's "follow-up" procedures to ensure project is implemented in compliance with provisions of the Final EIS for this project: (obtain copies of appropriate regulations)

- 7.9 If interviewee prepares EIS's, ask how many he has prepared on a quarter-by-quarter basis since beginning of FY 1972 _____

EIS Analysis Interviewees and Correspondents

No. Name

1. Mr. Sam R. Morgan, Chief
Plan Formulation Section
Memphis District
Corps of Engineers
668 Federal Office Building
Memphis, Tennessee 38103
2. Mr. Theodore E. Haeussner, Chief
Environmental Resources Section
Project Planning Branch
Engineering Division
Jacksonville District
Corps of Engineers
P.O. Box 4970
Jacksonville, Florida 32201
3. Mr. Nathaniel D. McClure, IV
Sanitary Engineer
Corps of Engineers
P.O. Box 2288
Mobile, Alabama 36628
4. Mr. E. A. Drago, Chief
Environment and Resources Branch
Mobile District
Corps of Engineers
P.O. Box 2288
Mobile, Alabama 36628
5. Mr. James M. Kesecker
Leader, RB-Watershed Planning
Soil Conservation Service
Columbia, South Carolina 29201
6. Mr. Dale O. Vandenburg
Group Leader
Forest Pest Management, EPI
U.S. Forest Service
6816 Market Street
Upper Darby, Pennsylvania 19082
7. Mr. Peter W. Orr
Entomology Staff Specialist
Northeast Area
U.S. Forest Service
6816 Market Street
Upper Darby, Pennsylvania 19082

- | <u>No.</u> | <u>Name</u> |
|------------|---|
| 8. | Mr. Russ Smith
Division Director
Forest Pest Division
Roslyn, Va.
(703) 557-9160 |
| 9. | Mr. Barry Flamm
Environmental Coordinator
U.S. Forest Service
(202) 447-4708 |
| 10. | Mr. Donald L. Olsen, Chief
Power Planning Branch
S.E. Area Electric
Rural Electrification Administration
Washington, D.C. 20250 |
| 11. | Mr. Sherman B. Harris
Advertising Manager
The Winchester Sun
Winchester, Kentucky |
| 12. | Mr. Don Morgan
Acting Chief
Airport Planning Branch
Southeast Regional Office
Federal Aviation Administration
Atlanta, Georgia |
| 12. | Mr. Charles Blair
Planning Engineer
Southeast Regional Office
Federal Aviation Administration
Atlanta, Georgia |
| 13. | Commander W. A. Stockdale, Chairman
Rockingham County Airport Commission
(919) 349-9279 |
| 14. | Mr. Fred Cox
Talbert, Cox & Associates
Consulting Engineers
P.O. Box 3231
Charlotte, N.C. 28203 |
| 15. | Mr. Jackie C. Blackburn, Chairman
Ashe County Airport Authority
Ashe County, North Carolina
(919) 246-9982 |

No. Name

16. Mr. Blanton J. Jones, Chairman
Holly Springs-Marshall County
Joint Airport Board
Holly Springs, Mississippi
(601) 252-2202
17. Mr. Cleveland M. Paylor
City Manager
Town of Plymouth
Plymouth, North Carolina
(919) 793-3622
18. Mr. Robert F. Kennedy
Engineer of Alternate System and
Route Studies
Bureau of Planning
Plan Evaluation Section
Florida Department of Transportation
Tallahassee, Florida 32304
19. Mr. Fred Teel
Florida Department of Transportation
Chipley, Florida
(904) 638-0250
20. Mr. Robert B. Ferrell
Environmental Program Coordinator
Assistant State Highway Engineer for
Preconstruction
South Carolina Highway Department
(803) 758-3408
21. Mr. James W. Fehr, Director
Division of Planning
Kentucky Bureau of Highways
419 Ann Street
Frankfort, Kentucky 40601
22. Mr. Jere Burrus
Chief of Plan Development Bureau
State Highway Department of Georgia
Room 1111
Equitable Building
Atlanta, Georgia
23. Mr. Ronald K. Colvin
Office of Roadway Design
State Highway Department of Georgia
Atlanta, Georgia
656-5393

- | <u>No.</u> | <u>Name</u> |
|------------|---|
| 24. | Mr. Leon Jackson Ward
Project Engineer
Planning and Research Department
North Carolina State Highway Commission
Raleigh, North Carolina
(919) 829-7842 |
| 25. | Mr. William E. Powell
Highway Design Engineer
Bureau of Surveys and Plans
Alabama State Highway Department
Montgomery, Alabama 36104 |
| 26. | Mr. Frank A. Martin
Bridge Management Specialist
Bridge Division
U.S. Coast Guard
Washington, D.C. 20590 |
| 27. | Commander Kenneth J. Wiman
U.S. Coast Guard
400 Seventh Street, S.W.
Washington, D.C. 20590 |
| 28. | Mr. Ben Harless
Staff Assistant to the
Assistant Director for Environmental
Projects
Directorate of Licensing
Atomic Energy Commission
Washington, D.C. 20545 |
| 29. | Mr. Jack McWherter
Oakridge National Laboratory
Oakridge, Tennessee
(615) 483-1423 |
| 30. | Mr. Walter Prybyla
Program Officer
Urban Planning
Office of Community and
Environmental Standards
Department of Housing and
Urban Development
Washington, D.C. 20410 |

- | <u>No.</u> | <u>Name</u> |
|------------|---|
| 31. | Mr. Richard H. Broun
Acting Director
Office of Community and
Environmental Standards
Department of Housing and
Urban Development
Washington, D.C. 20410 |
| 32. | Dr. Harry G. Moore, Chief
Environmental Planning and
Assessment Staff
Tennessee Valley Authority
Chattanooga, Tennessee 37401 |
| 33. | Mr. Sheppard N. Moore, Chief
Environmental Impact Statement Staff
Environmental Protection Agency
Region IV
1421 Peachtree Street, N.E.
Atlanta, Georgia 30309 |
| 34. | Mr. John A. Little
Director, Surveillance & Analysis Division
Environmental Protection Agency
Region IV
1421 Peachtree Street, N.E.
Atlanta, Georgia 30309 |
| 35. | Mr. George E. White
Sanitary Engineer
Facilities Branch
Environmental Protection Agency
Region IV
1421 Peachtree Street, N.E.
Atlanta, Georgia 30309 |
| 36. | Dr. Carl Sova
Research and Monitoring
Program Representative
Environmental Protection Agency
Region IV
1421 Peachtree Street, N.E.
Atlanta, Georgia 30309 |
| 37. | Mr. David R. Hopkins
Acting Chief
EIS Branch
Environmental Protection Agency
Region IV
1421 Peachtree Street
Atlanta, Georgia 30309 |

APPENDIX H

Biographical Questionnaire of EPA Regional Personnel



GEORGIA STATE UNIVERSITY

33 GILMER STREET, S. E. • ATLANTA, GEORGIA 30303

May 25, 1973

459

MEMORANDUM

From: Donald R. Hudson, Instructor of Management
To: EPA Environmental Impact Statement Staff Personnel
Subj: Biographical Analysis of EIS Personnel

I am studying the EIS process as part of my doctoral work on Environmental Management. Mr. Sheppard Moore of EPA's Region IV is serving as an Independent Reader on my dissertation committee and has assisted in developing the brief set of questions which follow.

Your cooperation in providing the information requested will be very helpful to me personally and I would appreciate your help in completing this phase of the research. Would you please take a few moments to complete the items below and return this memo to me at the above address?

Results of this portion of the study will be made available to each Regional EIS Staff upon completion of the project.

1. EPA Region_____ 2. Male____or Female_____ 3. GS Rating_____
4. Time in present assignment_____
5. Total years of Federal service_____
6. Years of formal schooling (circle one):
 - a. Less than 12 school years
 - b. More than 12 but less than 16 school years
 - c. More than 16 but less than 17 school years
 - d. More than 17 but less than 18 school years
 - e. More than 18 but less than 19 school years
 - f. More than 19 school years
7. If you hold one or more college degrees, please complete the following:

Degree(s) - do not abbreviate	School	Date Rec'd.
(1) _____	_____	_____
(2) _____	_____	_____
(3) _____	_____	_____
(4) _____	_____	_____

EPA Environmental Impact Statement Staff Personnel
Questionnaire - Page Two

8. Number and type of impact statement(s) you have personally developed in your current EPA region:

Type EIS (Draft/Final)	Date Initiated	Date Completed
(1) _____	_____	_____
(2) _____	_____	_____
(3) _____	_____	_____
(4) _____	_____	_____
(5) _____	_____	_____
(6) _____	_____	_____
(7) _____	_____	_____
(8) _____	_____	_____

Please continue of reverse if more space required for # 8.

9. Has a Job Description been prepared which applies to your duties in connection with the preparation of EIS's?
Yes _____ No _____
10. If yes in # 9, please attach a copy of the Job Description and return it along with the completed questionnaire.

THANKS FOR YOUR HELP !!

Donald R. Hudson

Donald R. Hudson
Instructor of Management

APPENDIX I

Chronological Development of NEPA*

<u>Date</u>	<u>Event</u>
1969:	
February 17	<u>House</u> : H.R. 6750, "To amend the Fish and Wildlife Coordination Act to provide for the establishment of a Council on Environmental Quality, and for other purposes," presented to the House by Congressman John D. Dingell; referred to the Committee on Merchant Marine and Fisheries.
February 18	<u>Senate</u> : S. 1075 presented to the Senate by Senator Henry M. Jackson; referred to Committee on Interior and Insular Affairs.
April 15, 17	<u>Senate</u> : Executive communications received from Departments and Bureau of the Budget "not recommending" enactment of S. 1075.
April 16	<u>Senate</u> : Hearing on S. 1075.
May 12-July 1	<u>House</u> : Executive communications received from Departments; no consistent position, though all approved by Bureau of the Budget.
May 7 and 26, June 13-27	<u>House</u> : Hearings on H.R. 6750 and similar bills.
May 29	<u>Senate</u> : Amendment No. 25 introduced as substitute language by Senator Jackson, following review of the hearing record; bill ordered reported to the Senate June 18.
May 29	<u>Executive</u> : Executive Order 11472 issued by President Nixon, establishing a Cabinet-level Environmental Quality Council.
June 14	<u>Senate</u> : Communication received from Bureau of the Budget, supporting statement of policy added by amendment.

* Restatement in chronological order of "Chronology of Legislative History of NEPA," Appendix A in Richard N. L. Andrews, "Environmental Policy and Administrative Change: The National Environmental Policy Act of 1969, 1970-1971," (Ph.D. diss., University of North Carolina at Chapel Hill, 1972) pp. 472-474.

<u>Date</u>	<u>Event</u>
June 18	<u>Senate</u> : Bill not reported to Senate due to oral request of Bureau of the Budget.
July 7	<u>Senate</u> : Communication from Bureau of the Budget proposing further amendments.
July 8	<u>Senate</u> : Bill reconsidered and further amended by committee.
July 9	<u>Senate</u> : Committee report (Senate Report 91-296) filed unanimously.
July 11 and 19	<u>House</u> : Amended version of H.R. 6750 reported unanimously by committee as a "clean bill" H.R. 12549, cosponsored by all members of the committee save one (House Report 91-378, parts 1 and 2).
September 23	<u>House</u> : Floor debate on H.R. 12549: amendments by Congressman Aspinall and Reuss agreed to, amendment by Congressman Daddario rejected on point of order; H.R. 12549 passed by vote of 372-15; language of H.R. 12549 substituted for language of S. 1075; conference requested with Senate.
October 8	<u>Senate</u> : Floor debate on S. 1075 as modified by the House and on S. 7, the Water Quality Improvement Act of 1969 (the "Muskie bill"); "Muskie-Jackson compromise" explained and agreed to by Senators Muskie and Jackson; Senate conferees on S. 1075 appointed, and instructed to insist upon language agreed to by Muskie and Jackson.
December 17	<u>House and Senate</u> : Conference Report on S. 1075 submitted to both houses of Congress (House Report 91-765).
December 20	<u>Senate</u> : Floor debate on conference report; conference report agreed to by the Senate.
December 23	<u>House</u> : Floor debate on conference report; conference report agreed to by the House of Representatives.

DateEvent

January 1,
1970

Executive: S. 1075 signed by President
Nixon, enacted as Public Law 91-190, the
National Environmental Policy Act of 1969.



Public Law 91-190
91st Congress, S. 1075
January 1, 1970

An Act

83 STAT. 852

To establish a national policy for the environment, to provide for the establishment of a Council on Environmental Quality, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "National Environmental Policy Act of 1969".

National Environmental
Policy Act of
1969.

PURPOSE

SEC. 2. The purposes of this Act are: To declare a national policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation; and to establish a Council on Environmental Quality.

TITLE I

DECLARATION OF NATIONAL ENVIRONMENTAL POLICY

SEC. 101. (a) The Congress, recognizing the profound impact of man's activity on the interrelations of all components of the natural environment, particularly the profound influences of population growth, high-density urbanization, industrial expansion, resource exploitation, and new and expanding technological advances and recognizing further the critical importance of restoring and maintaining environmental quality to the overall welfare and development of man, declares that it is the continuing policy of the Federal Government, in cooperation with State and local governments, and other concerned public and private organizations, to use all practicable means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans.

(b) In order to carry out the policy set forth in this Act, it is the continuing responsibility of the Federal Government to use all practicable means, consistent with other essential considerations of national policy, to improve and coordinate Federal plans, functions, programs, and resources to the end that the Nation may—

- (1) fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
- (2) assure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings;
- (3) attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;
- (4) preserve important historic, cultural, and natural aspects of our national heritage, and maintain, wherever possible, an environment which supports diversity and variety of individual choice;
- (5) achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities; and

(6) enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

(c) The Congress recognizes that each person should enjoy a healthful environment and that each person has a responsibility to contribute to the preservation and enhancement of the environment.

Administration.

SEC. 102. The Congress authorizes and directs that, to the fullest extent possible: (1) the policies, regulations, and public laws of the United States shall be interpreted and administered in accordance with the policies set forth in this Act, and (2) all agencies of the Federal Government shall—

(A) utilize a systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts in planning and in decisionmaking which may have an impact on man's environment;

(B) identify and develop methods and procedures, in consultation with the Council on Environmental Quality established by title II of this Act, which will insure that presently unquantified environmental amenities and values may be given appropriate consideration in decisionmaking along with economic and technical considerations;

(C) include in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on—

- (i) the environmental impact of the proposed action,
- (ii) any adverse environmental effects which cannot be avoided should the proposal be implemented,
- (iii) alternatives to the proposed action,
- (iv) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and
- (v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

Prior to making any detailed statement, the responsible Federal official shall consult with and obtain the comments of any Federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved. Copies of such statement and the comments and views of the appropriate Federal, State, and local agencies, which are authorized to develop and enforce environmental standards, shall be made available to the President, the Council on Environmental Quality and to the public as provided by section 552 of title 5, United States Code, and shall accompany the proposal through the existing agency review processes;

(D) study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources;

(E) recognize the worldwide and long-range character of environmental problems and, where consistent with the foreign policy of the United States, lend appropriate support to initiatives, resolutions, and programs designed to maximize international cooperation in anticipating and preventing a decline in the quality of mankind's world environment;

(F) make available to States, counties, municipalities, institutions, and individuals, advice and information useful in restoring, maintaining, and enhancing the quality of the environment;

Copies of statements, etc., available.

81 Stat. 54.

January 1, 1970

- 3 -

Pub. Law 91-190

83 STAT. 854

(G) initiate and utilize ecological information in the planning and development of resource-oriented projects; and

(H) assist the Council on Environmental Quality established by title II of this Act.

SEC. 103. All agencies of the Federal Government shall review their present statutory authority, administrative regulations, and current policies and procedures for the purpose of determining whether there are any deficiencies or inconsistencies therein which prohibit full compliance with the purposes and provisions of this Act and shall propose to the President not later than July 1, 1971, such measures as may be necessary to bring their authority and policies into conformity with the intent, purposes, and procedures set forth in this Act.

SEC. 104. Nothing in Section 102 or 103 shall in any way affect the specific statutory obligations of any Federal agency (1) to comply with criteria or standards of environmental quality, (2) to coordinate or consult with any other Federal or State agency, or (3) to act, or refrain from acting contingent upon the recommendations or certification of any other Federal or State agency.

SEC. 105. The policies and goals set forth in this Act are supplementary to those set forth in existing authorizations of Federal agencies.

TITLE II

COUNCIL ON ENVIRONMENTAL QUALITY

SEC. 201. The President shall transmit to the Congress annually beginning July 1, 1970, an Environmental Quality Report (hereinafter referred to as the "report") which shall set forth (1) the status and condition of the major natural, manmade, or altered environmental classes of the Nation, including, but not limited to, the air, the aquatic, including marine, estuarine, and fresh water, and the terrestrial environment, including, but not limited to, the forest, dryland, wetland, range, urban, suburban, and rural environment; (2) current and foreseeable trends in the quality, management and utilization of such environments and the effects of those trends on the social, economic, and other requirements of the Nation; (3) the adequacy of available natural resources for fulfilling human and economic requirements of the Nation in the light of expected population pressures; (4) a review of the programs and activities (including regulatory activities) of the Federal Government, the State and local governments, and nongovernmental entities or individuals, with particular reference to their effect on the environment and on the conservation, development and utilization of natural resources; and (5) a program for remedying the deficiencies of existing programs and activities, together with recommendations for legislation.

SEC. 202. There is created in the Executive Office of the President a Council on Environmental Quality (hereinafter referred to as the "Council"). The Council shall be composed of three members who shall be appointed by the President to serve at his pleasure, by and with the advice and consent of the Senate. The President shall designate one of the members of the Council to serve as Chairman. Each member shall be a person who, as a result of his training, experience, and attainments, is exceptionally well qualified to analyze and interpret environmental trends and information of all kinds: to appraise programs and activities of the Federal Government in the light of the policy set forth in title I of this Act; to be conscious of and responsive to the scientific, economic, social, esthetic, and cultural needs and interests of the Nation; and to formulate and recommend national policies to promote the improvement of the quality of the environment.

80 Stat. 416.
Duties and
functions.

Sec. 203. The Council may employ such officers and employees as may be necessary to carry out its functions under this Act. In addition, the Council may employ and fix the compensation of such experts and consultants as may be necessary for the carrying out of its functions under this Act, in accordance with section 3109 of title 5, United States Code (but without regard to the last sentence thereof).

Sec. 204. It shall be the duty and function of the Council—

(1) to assist and advise the President in the preparation of the Environmental Quality Report required by section 201;

(2) to gather timely and authoritative information concerning the conditions and trends in the quality of the environment both current and prospective, to analyze and interpret such information for the purpose of determining whether such conditions and trends are interfering, or are likely to interfere, with the achievement of the policy set forth in title I of this Act, and to compile and submit to the President studies relating to such conditions and trends;

(3) to review and appraise the various programs and activities of the Federal Government in the light of the policy set forth in title I of this Act for the purpose of determining the extent to which such programs and activities are contributing to the achievement of such policy, and to make recommendations to the President with respect thereto;

(4) to develop and recommend to the President national policies to foster and promote the improvement of environmental quality to meet the conservation, social, economic, health, and other requirements and goals of the Nation;

(5) to conduct investigations, studies, surveys, research, and analyses relating to ecological systems and environmental quality;

(6) to document and define changes in the natural environment, including the plant and animal systems, and to accumulate necessary data and other information for a continuing analysis of these changes or trends and an interpretation of their underlying causes;

(7) to report at least once each year to the President on the state and condition of the environment; and

(8) to make and furnish such studies, reports thereon, and recommendations with respect to matters of policy and legislation as the President may request.

Sec. 205. In exercising its powers, functions, and duties under this Act, the Council shall—

(1) consult with the Citizens' Advisory Committee on Environmental Quality established by Executive Order numbered 11472, dated May 29, 1969, and with such representatives of science, industry, agriculture, labor, conservation organizations, State and local governments and other groups, as it deems advisable; and

(2) utilize, to the fullest extent possible, the services, facilities, and information (including statistical information) of public and private agencies and organizations, and individuals, in order that duplication of effort and expense may be avoided, thus assuring that the Council's activities will not unnecessarily overlap or conflict with similar activities authorized by law and performed by established agencies.

January 1, 1970

- 5 -

Pub. Law 91-190

83 STAT. 856

Sec. 906. Members of the Council shall serve full time and the Chairman of the Council shall be compensated at the rate provided for Level II of the Executive Schedule Pay Rates (5 U.S.C. 5313). The other members of the Council shall be compensated at the rate provided for Level IV or the Executive Schedule Pay Rates (5 U.S.C. 5315).

Tenure and
compensation.
80 Stat. 460,
461.

81 Stat. 638.

Sec. 907. There are authorized to be appropriated to carry out the provisions of this Act not to exceed \$300,000 for fiscal year 1970, \$700,000 for fiscal year 1971, and \$1,000,000 for each fiscal year thereafter.

Appropriations.

Approved January 1, 1970.

LEGISLATIVE HISTORY:

HOUSE REPORTS: No. 91-376, 91-378, pt. 2, accompanying H. R. 12549
(Comm. on Merchant Marine & Fisheries) and 91-765
(Comm. of Conference).

SENATE REPORT No. 91-296 (Comm. on Interior & Insular Affairs).
CONGRESSIONAL RECORD, Vol. 115 (1969):

July 10: Considered and passed Senate.

Sept. 23: Considered and passed House, amended, in lieu of
H. R. 12549.

Oct. 8: Senate disagreed to House amendments; agreed to
conference.

Dec. 20: Senate agreed to conference report.

Dec. 22: House agreed to conference report.

PROTECTION AND ENHANCEMENT OF ENVIRONMENTAL QUALITY

By virtue of the authority vested in me as President of the United States and in furtherance of the purpose and policy of the National Environmental Policy Act of 1969 (Public Law No. 91-190, approved January 1, 1970), it is ordered as follows:

SECTION 1. Policy. The Federal Government shall provide leadership in protecting and enhancing the quality of the Nation's environment to sustain and enrich human life. Federal agencies shall initiate measures needed to direct their policies, plans and programs so as to meet national environmental goals. The Council on Environmental Quality, through the Chairman, shall advise and assist the President in leading this national effort.

SEC. 2. Responsibilities of Federal agencies. Consonant with Title I of the National Environmental Policy Act of 1969, hereafter referred to as the "Act", the heads of Federal agencies shall:

(a) Monitor, evaluate, and control on a continuing basis their agencies' activities so as to protect and enhance the quality of the environment. Such activities shall include those directed to controlling pollution and enhancing the environment and those designed to accomplish other program objectives which may affect the quality of the environment. Agencies shall develop programs and measures to protect and enhance environmental quality and shall assess progress in meeting the specific objectives of such activities. Heads of agencies shall consult with appropriate Federal, State and local agencies in carrying out their activities as they affect the quality of the environment.

(b) Develop procedures to ensure the fullest practicable provision of timely public information and understanding of Federal plans and programs with environmental impact in order to obtain the views of interested parties. These procedures shall include, whenever appropriate, provision for public hearings, and shall provide the public with relevant information, including information on alternative courses of action. Federal agencies shall also encourage State and local agencies to adopt similar procedures for informing the public concerning their activities affecting the quality of the environment.

(c) Insure that information regarding existing or potential environmental problems and control methods developed as part of research, development, demonstration, test, or evaluation activities is made available to Federal agencies, States, counties, municipalities, institutions, and other entities, as appropriate.

(d) Review their agencies' statutory authority, administrative regulations, policies, and procedures, including those relating to loans, grants, contracts, leases, licenses, or permits, in order to identify any deficiencies or inconsistencies therein which prohibit or limit full compliance with the purposes and provisions of the Act. A report on this review and the corrective actions taken or planned, including such measures to be proposed to the President as may be necessary to bring their authority and policies into conformance with the intent, purposes, and procedures of the Act, shall be provided to the Council on Environmental Quality not later than September 1, 1970.

(e) Engage in exchange of data and research results, and cooperate with agencies of other governments to foster the purposes of the Act.

(f) Proceed, in coordination with other agencies, with actions required by section 102 of the Act.

SEC. 3. Responsibilities of Council on Environmental Quality. The Council on Environmental Quality shall:

(a) Evaluate existing and proposed policies and activities of the Federal Government directed to the control of pollution and the enhancement of the environment and to the accomplishment of other objectives which affect the quality of the environment. This shall include continuing review of procedures employed in the development and enforcement of Federal standards affecting environmental quality. Based upon such evaluations the Council shall, where appropriate, recommend to the President policies and programs to achieve more

effective protection and enhancement of environmental quality and shall, where appropriate, seek resolution of significant environmental issues.

(b) Recommend to the President and to the agencies priorities among programs designed for the control of pollution and for enhancement of the environment.

(c) Determine the need for new policies and programs for dealing with environmental problems not being adequately addressed.

(d) Conduct, as it determines to be appropriate, public hearings or conferences on issues of environmental significance.

(e) Promote the development and use of indices and monitoring systems (1) to assess environmental conditions and trends, (2) to predict the environmental impact of proposed public and private actions, and (3) to determine the effectiveness of programs for protecting and enhancing environmental quality.

(f) Coordinate Federal programs related to environmental quality.

(g) Advise and assist the President and the agencies in achieving international cooperation for dealing with environmental problems, under the foreign policy guidance of the Secretary of State.

(h) Issue guidelines to Federal agencies for the preparation of detailed statements on proposals for legislation and other Federal actions affecting the environment, as required by section 102(2)(C) of the Act.

(i) Issue such other instructions to agencies, and request such reports and other information from them, as may be required to carry out the Council's responsibilities under the Act.

(j) Assist the President in preparing the annual Environmental Quality Report provided for in section 201 of the Act.

(k) Foster investigations, studies, surveys, research, and analyses relating to (i) ecological systems and environmental quality, (ii) the impact of new and changing technologies thereon, and (iii) means of preventing or reducing adverse effects from such technologies.

Sec. 4. Amendments of E.O. 11472. Executive Order No. 11472 of May 29, 1969, including the heading thereof, is hereby amended:

(1) By substituting for the term "the Environmental Quality Council", wherever it occurs, the following: "the Cabinet Committee on the Environment".

(2) By substituting for the term "the Council", wherever it occurs, the following: "the Cabinet Committee".

(3) By inserting in subsection (f) of section 101, after "Budget", the following: "the Director of the Office of Science and Technology,".

(4) By substituting for subsection (g) of section 101 the following:

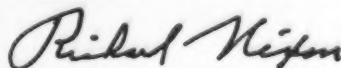
"(g) The Chairman of the Council on Environmental Quality (established by Public Law 91-190) shall assist the President in directing the affairs of the Cabinet Committee."

(5) By deleting subsection (c) of section 102.

(6) By substituting for "the Office of Science and Technology", in section 104, the following: "the Council on Environmental Quality (established by Public Law 91-190)".

(7) By substituting for "(hereinafter referred to as the 'Committee')", in section 201, the following: "(hereinafter referred to as the 'Citizens' Committee')".

(8) By substituting for the term "the Committee", wherever it occurs, the following: "the Citizens' Committee".



THE WHITE HOUSE,
March 5, 1970.

[F.R. Doc. 70-2861; Filed, Mar. 5, 1970; 2:29 p.m.]

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VITA

Donald Ray Hudson was born June 23, 1937, in Moline, Illinois. He attended Lincoln High School in Portland, Oregon, from which he graduated in 1955. From 1955 to 1959, Mr. Hudson attended Tulane University under a Naval R.O.T.C. scholarship. Upon graduation with a Bachelor of Business Administration degree he accepted a regular commission as a Second Lieutenant in the United States Marine Corps. Serving in a variety of command and administrative capacities, Mr. Hudson rose to the rank of Captain before leaving the service in September, 1967.

In January, 1968, he enrolled in the graduate school at the University of Miami, Coral Gables, Florida, where he majored in Management while working full time as a real estate development and construction executive. Upon completion of the Master of Business Administration program at the University of Miami, he moved to Georgia State University in Atlanta, Georgia to continue graduate studies in business administration.

In Atlanta, Mr. Hudson gained experience as a high school mathematics teacher and as a Research and Teaching Assistant. He was awarded an honorary appointment as an Instructor of Management by the faculty of Georgia State University's Management Department during the 1972-1973

school year. From September, 1973, to the present time Mr. Hudson has been teaching as an Assistant Professor of Business Administration at George Mason University, Fairfax, Virginia, while working toward completion of the Doctor of Philosophy in Business Administration degree at Georgia State University.

Mr. Hudson has co-authored articles on Technology Assessment, presented a paper on Social Auditing before the Southern Management Association at its annual meeting in 1972, and edited Sigma Iota Epsilon fraternity's quarterly journal, The Manager's Key.

In 1961, he married Ofelia M. Martin; they are the parents of three children. Among the organizations of which Mr. Hudson is a member are: the Academy of Management, the American Institute for Decision Sciences, and the World Future Society. His permanent address is: 6440 Overbrook Street, Falls Church, Virginia 22043.